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CONDITIONS OF ENTRANCE TO THE PRINCIPAL TRADES.

BY WALTER E. WEYL, PH. D., AND A. M. SAKOLSKI, PH. D.^(a)

INTRODUCTION.

An investigation into the conditions of entrance to the principal trades leads along two closely related lines of inquiry. One concerns itself with the advance in mechanical arts and the changes in industrial conditions which are constantly affecting the skill and qualifications of artizans and mechanics; the other relates to the methods commonly pursued in equipping workers for their respective trades and occupations and the adjustment of these methods to modern economic changes. The two are thus directly interwoven and interdependent. Every change in industrial processes which permanently alters the technical character of the labor in a certain trade or occupation is bound to affect the conditions of entrance thereto, however gradual or imperceptible the change may be. The starting point of this investigation must therefore be an inquiry into the industrial changes affecting the conditions of entrance to the leading trades. To even the most casual students of economics it is obvious that the conditions of industry and the nature of employments are constantly undergoing change. With each year come new advances in the mechanic arts; with each year occupations become more specialized and the division of labor more perfect and more minute. The machine displaces the hand process and more complicated machines displace those of a simple kind. The process of manufacture is divided and subdivided into an ever greater series of more minute operations. The old hand trades have disappeared or are disappearing. In the place of a well-defined occupation, the metes and bounds of which were known to all, a series of new trades has arisen,

^a The collection and arrangement of the data in this article, as well as the final preparation of a large part of the manuscript, was done entirely by Dr. A. M. Sakolski.

and what is more significant to the present study, there have come to be hundreds and thousands of new occupations, many of which consist in single simple operations.

The effect of this disintegration of trades upon the industrial efficiency of the community has frequently been studied. Its effect upon such problems as the localization and centralization of industry, upon the distribution of wealth, upon general unemployment, upon the monotony and upon the productivity of labor has also been studied. The present investigation, however, concerns the effect upon the skill and character of the workers and the consequent changes in the conditions of entrance to the various trades.

The importance of this problem can hardly be overestimated. Upon the skill or the lack of skill of the great mass of the workers of industrial countries depends in a large measure the nature and character of their populations. The habits acquired and the discipline received by workmen in the acquisition of technical skill are most potent influences upon their lives. But more important still is the selective influence that the technical character of a trade exerts upon the workers. If the labor processes require an increasing amount of skill and training for their performance, the more proficient workers of the community seek employment therein. If, on the other hand, the amount of skill needed in the processes of a trade is lessened, a corresponding tho opposite effect will be had upon the character and qualifications of the workers. The conditions of entrance to the trade having become less difficult, the less efficient workers are enabled to work alongside or to replace those who possess a higher degree of skill or efficiency.

It is not the object of this article to furnish any definite answer to the question whether the amount of skill required in industry has been increased or decreased as a result of the new industrial processes. Answers have been given to this question on the one side and on the other, but there has not yet been made any study sufficiently broad to permit an entirely unassailable reply to the question. The question is difficult by reason of the multiplicity of industrial operations, and it is complicated by the unequal growth of industries, by the constant introduction of new trades and the decay of others, and by the numerous gradations of skill and efficiency wrought by the extensive use of machinery and division of labor. It is also complicated by a change in the nature of skill itself—a change from manual dexterity to a more intellectual activity—and by a growing emphasis upon nervous rather than physical energy. Thru the use of mechanical devices and subdivision of labor in manufacturing processes, skill has become not only qualitative but quantitative; in other words, there is a skill which requires a man not only to do his work better but also to do more of it. New forms of skill indicate

not only manual dexterity, but speed, accuracy, and close mental application.

In view of these changes in the nature of skill itself, it is extremely difficult to apply any test which will determine whether the skill in an occupation is increasing or decreasing. For the purposes of this discussion, however, two tests may be roughly applied, viz: (1) The character and social condition of the workers in the trade or occupation, and (2) the length of preparatory training, or the experience required previous to entering the trade as an ordinary journeyman.

A study of the former test concerns itself with the displacement of native skilled workmen by unskilled foreign laborers at lower wages, or the displacement of one class of foreigners by another class of foreigners at lower wages, or the displacement of men by women and children. In almost every case of such displacement there is a presumption of a lessening of skill, tho the presumption may be rebutted in exceptional instances.

The second test of the standard of skill in a given occupation, viz, the training or experience essential to competition on the part of the worker, is by far the more important. Where the amount of technical training ordinarily required to become competent is lessened or the length of the apprenticeship term is shortened there are generally indications of decreasing skill. To this extent the decay of the old apprenticeship system of acquiring craft knowledge may be taken as evidence of loss of skill, altho the training formerly obtained under apprenticeship may under present conditions be obtained in other ways.

The importance of maintaining a high standard of skill in their occupations is felt by all workmen. It was this motive which led artizans, thru their associations and otherwise, to enforce stringent rules regarding apprenticeship and to exclude all from the trade who had not served the full apprenticeship term. It was this motive, likewise, which prompted so many workmen to resist the immediate introduction of machinery, as well as new processes, tending to reduce skill, since these generally interfered with the rigid enforcement of apprenticeship and otherwise affected the conditions of entrance to the trade.

The policy of directly opposing the introduction of machinery is now recognized as impracticable, and with the present disintegration of trades it is usually impossible, except in a few occupations, strictly to enforce apprenticeship regulations or otherwise effectively control the conditions of entrance to a trade. The present endeavor of workingmen to maintain the standard of skill in their craft is directed mainly to the regulation of the use of machinery and new processes introduced, as well as to the organization under their control of the machine operators and the lower grade workers.

There is also an endeavor on the part of many workers to maintain the standard of skill in their craft by prohibiting the grading of journeymen or by opposing teamwork and the employment of helpers and junior mechanics who may do the work of journeymen. The conditions of entrance to a trade thus become an important matter to workingmen desiring to prevent not only a too rapid increase in their numbers, but, more important still, the injection into the trade of men of less skill. The control of the entrance to the trade is, however, becoming increasingly difficult. The extensive use of machinery in almost all trades and handicrafts, the minute subdivision of labor processes, and the consequent specialization of occupations, have been gradually displacing the old forms of skill and workmanship and causing the institution of new methods of acquiring craft knowledge. The old system of apprenticeship, which at the beginning of the nineteenth century was the almost universal method of entering a trade or handicraft, is fast becoming obsolete. Tho in former days apprenticeship possessed many advantages, under modern conditions it is becoming more and more unsuitable, especially in trades in which there has already been marked a decline in the skill of the workers. In many important trades where the labor processes have been minutely subdivided and simplified, such as boot and shoe making, garment making, etc., apprenticeship regulations have been abandoned, and even in trades in which apprenticeship still forms the principal avenue of entrance to the trade it not only differs in many other respects from the old form of apprenticeship, but its term is lessened and the requirements are not so strict nor so rigidly enforced. In the building trades, for example, which have been less affected by machinery and the subdivision of labor than most other trades, many workmen become journeymen without serving a full apprenticeship. It is becoming recognized that the organization of modern industry is not adapted to the proper training of apprentices.

In industries in which production on a large scale is carried on as a result of the use of machinery and the subdivision of labor, neither the employer nor the workman can afford the time or the effort to apply himself systematically to the training of apprentices, and even if he could his work would be of small value to the boy, and is usually not desired by him. Boys can now readily become proficient in an occupation at which they can earn journeymen's wages by applying themselves to a particular branch of a trade rather than by endeavoring to acquire the whole trade thru an apprenticeship.

As a consequence of the unsuitability of the apprenticeship system to modern industrial conditions, other methods of acquiring skill in the craft have been substituted. Chief among these are, first, the helper system, by which a knowledge of the craft is acquired casually

in the shop, and, second, systematic trade and technical education. The first system is peculiar to certain trades in which experience rather than training is essential to competency, and in which the labor is too arduous for youths. Since there is no definite form of probation under the helper system, the workmen have no control over the number of learners in the trade. As a consequence, there is much friction between helpers and journeymen, and trouble arises from the endeavor of the journeymen to prevent the helpers from entering the trade.

Trade and technical education is applicable only to those trades requiring some scientific as well as manual skill. It is claimed by workingmen that the trade schools turn out mechanics too rapidly, without giving them a thoro knowledge of the craft, and that as a consequence there is a tendency to lower the standard of skill and the rate of wages. The same objection is not urged against trade and technical education where the men educated are already workers in the craft.

DISINTEGRATION OF TRADES.

The original conception of a trade or craft was that of a manual occupation requiring time and training for its acquisition. Every artizan or mechanic practising a craft was considered a sharer in a monopoly or a holder of a "vested right," which he enjoyed as a reward for the time and energy spent in acquiring proficiency. In other words, the trade of a mechanic was a "mystery," into the secrets of which he had been initiated thru the process of apprenticeship. If a worker gained entrance to his trade by other means than thru apprenticeship, he was considered an "illegal man" and his employment was prohibited. This difficulty of apprenticeship in a craft largely influenced the wages, hours, and standard of living of those who had earned in it the title of journeymen.

Before the eighteenth century the agricultural worker was practically the only workman who was not a craftsman or mechanic, not so much because his work may have required little training and skill but rather because he was not compelled to undergo a definite term of apprenticeship as evidence of proficiency.

The old conception of a trade or craft gradually changed with the development of modern industry following the rapid introduction of machinery and the subdivision of labor processes. It is now no longer necessary for every mechanic or artizan to acquire a knowledge of all branches of the craft in which he is engaged. Hence the long period of training, which was essential to every artizan practising any manual trade, in a great number of occupations and industries is fast becoming obsolete. In fact, the acquisition of manual dexterity under modern industrial conditions is often rendered useless, owing to

the introduction of a machine or the employment of some mechanical device, which does the work more effectively than it can be done by the hand process. Formerly, as a matter of necessity, the handicraftsman acquired proficiency in all branches and subdivisions of his peculiar trade. In most occupations at the present time he need learn only one branch or subdivision of a trade to enter upon an active industrial career and gain a livelihood at his calling. As a result of this condition occupations are constantly multiplied, while the demarcation of different manual trades and the class distinctions among different grades of artisans tend to disappear. The gradual disintegration of old crafts is constantly displacing the old forms of skill and manual efficiency by new manual and mechanical processes.

With the introduction of machinery, and with the constantly increasing subdivision of labor, trades either become eliminated altogether, or the various branches of one trade become differentiated or specialized. A continual struggle between hand labor and machine labor results. Hand labor either disappears altogether or is eventually remanded to higher artistic work, and thus the more skilful workers are called to the higher classes of work, while the unskilled workers are retained as machine operators.

Modern industrial development is thus creating new and more numerous gradations of workers in different trades and occupations. When, in former times, it was essential for the mechanic to learn his craft as a whole, he was capable of either producing a single commodity or performing a complete mechanical process, to which the tools and methods peculiar to his trade were adapted. Under modern conditions the mechanic may belong to one of several groups of workmen in the same industry, each group differing from the others in earnings and kind of work, the finished product of the combined groups being what was in former times the work of one man.

The "specialization" or subdivision of occupations is not only far advanced in the manufacturing industries, but has also affected many hand trades little influenced by machinery, in which formerly all the processes were performed by a single mechanic or by several mechanics of an equal grade of skill and efficiency. How far the disintegration of trades has progressed is illustrated by the recent developments in several of the important trades and industries.

Probably no other craft has undergone such rapid disintegration within recent years as that of the machinist. Regarding these changes in Great Britain Sidney and Beatrice Webb write as follows:

A century ago the small skilled class of millwrights executed every kind of engineering operation, from making the wooden patterns to erecting in the mill the machines which had been constructed by their own hands. The enormous expansion of the engineering industry has long since brought about a division of labor, and the mechanics in a great engineering establishment to-day are divided into numerous

distinct classes of workers, who are rarely able to do each other's work. The pattern makers, working in wood, have become sharply marked off from the boiler makers and the iron founders. The smiths, again, are distinguished from the fitters, turners, and erectors. Another form of specialization has arisen with the increased use of other metals than iron and steel, and we have brass founders, brass finishers, and coppersmiths. Each generation sees a great development in the use of machines to make machines, so that a modern engineering shop, in addition to the time-honored lathe, includes a bewildering variety of drilling, shaping, boring, planing, slotting, milling, and other machines, attended by wholly new classes of machine minders and tool makers, displaying every grade of skill. Finally we have such new kinds of work, with new classes of specialists, as are involved in the innumerable applications of iron and steel in modern civilization, such as iron ships and bridges, ordnance and armor plating, hydraulic apparatus and electric lighting, sewing machines and bicycles. To discover the exact limits of a "trade" in these closely related but varied occupations, is a task of supreme difficulty. All are working in the same industry, and in the large establishments of to-day, all may be engaged by a single employer. The same recurring waves of expansion and contraction sooner or later affect all alike. On the other hand, there exist between the separate occupations great varieties of methods of remuneration, standard earnings, and strategic position. The strictly apprenticed boiler makers (shipyard platers) working in compact groups, at cooperative piecework, earning sometimes as much as a pound [\$4.87] a day, find it advantageous in good times to roll up, by large subscriptions, a huge reserve fund, to maintain a staff of special trade officers to arrange their piecework prices at every port, and to provide handsomely for their recurring periods of trade depression. At the other end of the scale we have the intelligent laborer become an automatic machine minder, securing relative continuity of low-paid employment by working any simple machine in any kind of engineering establishment, and interested mainly in the opening of every operation to the quick-witted outsider. The pattern maker again, working in wood, at a high time rate, has little in common with the pieceworking smith at the forge.^(a)

In the United States a similar differentiation has taken place in the machine trades, making it exceedingly difficult to specify the work done by machinists. In fact, the International Association of Machinists during the last decade has experienced considerable difficulty in defining the craft of its members. At the meeting of the arbitration board of the International Association of Machinists and the National Metal Trades' Association in New York, May 10, 1900, the following definition of a machinist was adopted by resolution:

A machinist is classified as a competent general workman, competent floor hand, competent lathe hand, competent vise hand, competent planer hand, competent shaper hand, competent milling-machine hand, competent slotting-machine hand, competent die sinker, competent boring-mill hand, competent tool maker and competent linotype hand. To be considered a competent hand in either

^a Industrial Democracy, new edition, 1902, p. 107.

class, he [the machinist] shall be able to take any piece of work pertaining to his class, with the drawings or blueprints, and prosecute the work to successful completion within a reasonable time. He shall also have served a regular apprenticeship or have worked at the trade four years.^(a)

The Milwaukee convention of the International Association of Machinists held in May, 1903, extended further the scope of the definition given above by admitting specialized workmen in the machine shop—who in reality are not considered all-round machinists—to a classified membership in the association. They still excluded, however, workmen in the machine shop who, by reason of their slight training and skill, are properly called “handy men.”

The extent of the jurisdiction of the International Association of Machinists, as a result of the admission of specialists to membership, covered the following classes of machine-shop workers, according to the report of the president of the association, July 1, 1904:

(1) General hands, (2) erecting hands, (3) floor hands, (4) vise hands, (5) assemblers, (6) adjusters and repairers of metal working parts of all classes of machinery, (7) men operating all classes of lathes, (8) men operating all classes of planers, (9) milling machine men, (10) men operating all classes of shapers, (11) men operating all classes of slotters, (12) men operating all classes of boring mills, (13) men operating all classes of gear cutters, (14) tool grinders, (15) men operating Jones & Lamson, Gisholt, and American turret lathes, (16) drill press hands, (17) screw machine hands, (18) men operating all machines of a similar character as heretofore mentioned, (19) tool makers, (20) die sinkers, (21) jig workers, (22) mold makers in glass factories or elsewhere, (23) all men engaged in the manufacture of metal model novelties, where skilled hand labor or machines are used, (24) all surgical instrument makers, (25) all metal pattern makers employed in machine shop.^(b)

The recent general convention of the International Association of Machinists (1905) took a further step in extending its jurisdiction, enacting a law admitting any person to the union who attends a machine that is not absolutely automatic in its operation, whether he had served an apprenticeship or not, the only qualification being that he is competent to earn the standard rate of wages for the class of work performed by him. The International Association of Machinists accordingly comprizes at the present time all workers in the machine shop, except the common laborers and the attendants of perfectly automatic machines, such as nut-tapping machines, bolt cutters, power saws, and small simple drill presses used to drill rough holes upon common rough work.

Owing to this minute subdivision and subclassification of machinists' work, it is not a difficult matter for employers to introduce the

^a Machinists' Monthly Journal, Vol. XII, p. 313.

^b Ibid., Vol. XVI, p. 790.

"handy man" in a position formerly occupied by skilled machinists, thus causing numerous disputes and conflicts. Commenting upon this situation the president of the International Association of Machinists, in the report of April 1, 1903, said:

You will notice from the report on strikes that we have had several strikes against the introduction of the "handy-man system." The employers are not to blame for this in all cases, for now and then we find instances where the machinists refuse to do a certain class of work. As a result the employer is forced to employ whomever he can get to do the rest of the work.

The difficulty we are constantly confronted with is to decide in what consists machinists' work. For instance, in some locomotive shops machinists do steam-pipe work and the building of engine works, while in others this work is performed exclusively by the "handy man." There should be drawn a definite line, so that members of our organization should know their constitutional rights, and feel that they will be considered in the fulfilment of the same.

In my opinion we can not completely solve this problem until we have taken entire control of the machine shop, when we will be in a position to make an agreement covering the employment of all who work therein.^(a)

The difficulty of defining machinists' work is plainly the result of the evolution of machine-shop equipment during the last decade, an evolution which resulted in the widespread introduction of automatic and semiautomatic machines and all kinds of special tools, rendering it possible for unskilled mechanics to do the work formerly done by skilled machinists. Regarding these changes a writer in *Cassier's Magazine* makes this comment:

The twentieth century conception of a machine shop is not an aggregation of intelligent workmen, provided with the most efficient tools and apparatus that ingenuity can devise, and using them with all the cunning that trained minds can suggest. The shop, from the present standpoint, is simply a huge machine tool, as void of conscious volition as an automatic screw machine, of which the intelligent operator is the manager, and in which lathes and workmen, drills and inspectors, nutting machines and laborers are on one common plane of nonsentient, coacting subordination.^(b)

Similarly, in carpentry and woodworking, the labor-saving machinery has accomplished remarkable changes during the past three decades. Only the older generation of house carpenters, and a few younger men who have learned their trade under more conservative

^a The absence of a definitely accepted classification of machinists' work up to the year 1900 was a constant cause of difficulty with employers. All machine shops employ a number of so-called "handy men," who in some union shops are permitted to do certain kinds of work, which in others are regarded as properly belonging to the machinists' craft. The definition of a machinist, as given at the meeting of the arbitration board in 1900, has since been largely accepted in union shops, and thus the atmosphere has been cleared somewhat.

^b Louis Bell, *The Philanthropy of Self Help*, *Cassier's Magazine*, Vol. XXIV, p. 440.

conditions, can now make doors, shutters, sashes, or frames with any degree of dexterity. The introduction of machinery has transferred that work to the planing mills, and the work of the house carpenter is limited to fitting the products of the mill together. When the change was first introduced, about thirty or thirty-five years ago, it affected a great reduction in the cost of building operations. The steam planer, shaper, and mortising machine began to turn out work at a cost that seemed phenomenally low when compared with the cost of the handmade product.^(a)

The trade of the cabinetmaker is likewise invaded by the machine-made goods. The cabinetmaker of to-day, even where hand work predominates, is not like his father. He makes a table top, but not the legs. The man who makes the legs can not make a wardrobe. The wardrobe hand never touches a chest of drawers, or a sideboard, or a chiffonier.^(b) Practically the only all-round cabinetmaker of the present time is the man who executes repairs. The others do not exercise the craft as a whole, but only a very small part of it. Moreover, the furniture industry of the present day is essentially a machine industry employing unskilled labor. Wages in this craft were formerly much higher than at present, and furniture making was called a good trade. In 1900, it was stated in the testimony before the Industrial Commission, wages in furniture factories thruout the country did not average more than \$1.25 a day. The furniture workers were not sufficiently organized to adjust themselves to the new conditions wrought by the rapid introduction of machinery. Consequently another class of workmen, the machine wood workers, largely composed of unskilled immigrant laborers, began rapidly to displace the skilled carpenters and cabinetmakers. According to the Report of the Industrial Commission,^(c) out of every 75 men employed in a furniture factory perhaps only 5 are skilled mechanics, the rest being simply feeders; in this way a large number of immigrants are employed, and often children and women find places. In 1900, in cabinetmaking, 50 per cent were Germans—who are considered in the trade as the best men—and 25 per cent were foreigners of other nationalities. The wages of machine wood workers vary from \$1.25 to nearly \$6 per day, the men receiving the lowest wages being box makers in large cities, and the men receiving the highest wages being last makers in New York.

The clothing industry offers another illustration of rapid transition from manufacture by hand to a factory system of production accompanied by the widespread introduction of machinery and a minute subdivision of labor. The revolution in the clothing industry in the

^a American Journal of Sociology, Vol. II, p. 786.

^b Cassier's Magazine, Vol. XX, p. 109.

^c Report of the Industrial Commission, Vol. XV, p. 424.

United States was brought about thru the introduction during the early seventies of the so-called "team work." Previously it had been the practise for a tailor to make an entire garment. A slight division of labor resulted from the use of the sewing machine, which came into use about 1850; but it was not until the seventies that the factory system in the form of the contractor's shop was predominant in the manufacture of ready-made garments. With this change in the mode of manufacture the industry no longer required skilled handicraftsmen to the same extent as formerly. The employment of men in teams to produce a single garment introduced a system of division of labor which made it unnecessary for most of the workers to be skilled artizans. Consequently it became unprofitable for employers to make use of journeymen tailors in the manufacture of ready-made garments. These men were readily replaced by unskilled Jewish, Italian, and Scandinavian immigrants, employed in teams by the so-called "contractors," whose only interest lay in the furnishing of a large product to the manufacturer at a low cost to themselves.

Under the "contracting system" the clothing manufacturers, instead of keeping tailors employed in their own shops or having the clothing sent to the homes of the individual workers to be made up, turn over the cut cloth and trimmings to a contractor, who, for a stipulated sum, agrees to have them made up into finished garments. For this purpose the contractor employs one or more teams of workmen. A team usually consists of from three to eight men, each of whom is engaged on a specific part of the garment. In a team engaged in coat making, for example, one man does the machine stitching, another sews on the sleeves, while others do the basting, buttonhole making, etc. There is also one man who does the pressing, and a girl who does the finishing and sews on the buttons. When trade is dull and the different teams compete for work, the members must either consent to work for lower wages or agree with the contractor to turn out a larger product at the end of each day for the same wages. Hence the process of "sweating," the evils of which have been frequently brought to the attention of the public thru repeated investigations and Government inquiries.

In the modern clothing factory—a still later phase of the development of the clothing industry and one which is fast superseding the contractor's shop—there is a further subdivision of labor, and a still more extensive use of the mechanical motive power and machinery. Whereas, under the contracting system 3 to 20 persons were employed in one shop, a factory now employs 200, and each garment passes thru the hands of from 50 to 100 persons. Moreover, factory production on a large scale permits the use of machinery and improved mechanical devices in working out the smallest details of garment construction. By thus subdividing complex operations the factory

system facilitates the entrance to the trade of less skilled workers. An apprentice or beginner can learn individual operations in the garment-making trade by a few weeks' training, while the simplicity of the specialized work soon permits the attainment of a speed and efficiency which the all-round journeyman tailor of former days never dreamed of acquiring.

In a shop where specialization has reached its highest development under the factory system, the different occupations comprized in the manufacture of a coat are those of the (1) fitter (who also cuts the linings, marks the pockets, and puts on tickets), (2) pocket maker, (3) canvas baster, (4) padder of lapels, (5) bar tacker (on pockets), (6) seam presser, (7) lining maker, (8) lining operator, (9) sleeve maker, (10) lining presser, (11) sleeve presser, (12) collar padder, (13) shaper, (14) baster and fuller of stay tape, (15) lining baster (prepares for machine), (16) operator, (17) presser, (18) edge cutter, (19) edge baster, (20) lining baster for shoulders, (21) operator for shoulders, (22) sleeve baster around edge, (23) collar and sleeve baster (prepares for operator), (24) presser on sleeve, (25) joiner of collar to lapel, (26) armhole baster, (27) operator who sews in sleeves, (28) garment examiner, (29) collar finisher, (30) lining finisher around armhole, (31) basting puller, (32) edge presser, (33) buttonhole cutter, (34) buttonhole maker, (35) general busheler and hanger sewer, (36) presser of entire coat, (37) button marker, (38) button sewer, and (39) busheler.^(a)

A similar multiplication of occupations with simplification of processes has taken place in the slaughtering and meat-packing industry. Before the advent of large slaughtering and packing houses a cattle butcher was an all-round workman. He knew the butchering business in all its details, and was able to kill and dress a bullock with the aid of one or two helpers. In those days it required from three to five years for a learner to become proficient as a cattle or sheep butcher. At the present time, with the minute division of labor existing in the large butchering concerns, any ordinary laborer can be trained in one of the numerous occupations within a week's time.^(b) According to Professor Commons:

It would be difficult to find another industry where division of labor has been so ingeniously and microscopically worked out. The animal has been surveyed and laid off like a map; and the men have been classified in over thirty specialties and twenty rates of pay from 16 cents to 50 cents an hour. The 50-cent man is restricted to

^a Pope, *The Clothing Industry in New York*, pp. 70, 71.

^b The butchers' union of Australia still maintains apprentice regulations, defining the period of apprenticeship and limiting the work that is to be done by an apprentice, but since the organization of the present national union of butcher workmen in this country no attempt has ever been made to institute a system of apprenticeship.

using the knife on the most delicate parts of the hide (floorman) or to using the ax in splitting the backbone (splitter); and wherever a less skilled man can be slipped in at 18 cents, 18½ cents, 20 cents, 21 cents, 22½ cents, 24 cents, 25 cents, and so on, a place is made for him and an occupation mapped out. In working on the hide alone there are nine positions at eight different rates of pay. A 20-cent man pulls off the tail, a 22½-cent man pounds off another part where the hide separates readily, and the knife of the 40-cent man cuts a different texture and has a different "feel" from that of the 50-cent man. Skill has become specialized to fit the anatomy.

In this way, in a gang of 230 men killing 105 cattle an hour there are but 11 men paid 50 cents an hour, 3 men paid 45 cents, while the number getting 20 cents and over is 86, and the number getting under 20 cents is 144.^(a)

The following table shows a list of occupations in 1903-4 in Chicago packing houses, with the number of men in each occupation for a gang of 230 men, their rates of pay, and their schedule of output:

CATTLE BUTCHERS, GANG OF 230 MEN.^(b)

No. of men.	Position.	Scale of wages per hour.	Scale of work (No. of cattle per hour), 1903-4.
3	Penner.....	\$0.18½	Left to House committee.
1	Knocker, when raising gates and dumping out..	.24	60.
	Knocking only.....	.24	80.
2	Shackler.....	.18½	Left to House committee.
2	Hoister.....	.20	Left to House committee.
	Sticking.....	.32½	Left to House committee.
4	Heading and sticking.....	.32½	25.
	Heading only.....	.32½	30.
1	Dropper.....	.20	Left to House committee.
2	Pritcher up.....	.20	Left to House committee.
1	Gullet raiser.....	.20	Left to House committee.
3	Foot skinner.....	.22½	35.
3	Leg breaker.....	.25	25 sets.
1½	Ripper open.....	.25	80.
7	Floorman.....	.50	15.
1½	Breast sawyer.....	.25	75.
1½	Caul puller.....	.26½	50.
	Pulling cauls and opening eich.....	.20	40.
1	Eich opener.....	.20	75.
1	Tail ripper.....	.20	20.
3	Fell cutter.....	.27½	25.
	Cord cutter.....	.27½	Left to House committee.
2½	Rumper.....	.40	40.
3	Fell beater.....	.22½	
	Fell puller.....	.22½	60.
2	Gutter.....	.26½	40.
2½	Backer.....	.45	40.
3	Tail sawyer.....	.26½	30.
4	Splitter.....	.50	25.
2	Hanging off.....	.22½	60.
2½	Clearing out.....	.30	40.
2½	Hide dropper.....	.32½	40.
	Clear out and drop together.....	.32½	20.
1½	Neck splitter.....	.31½	60.
2½	Skirt trimmer.....	.21	60.
3	Ladder men.....	.22½	Left to House committee.
4	Bruise trimmer.....	.22½	Left to House committee.
1	Scribe sawyer.....	.20	Left to House committee.
1	Cutting out tongues.....	.21	100.
6	Boning heads.....	(c)	32½.
	All other knife men.....	.20	
	Laborers not covered by agreement.....	.16½-.19½	

^a Commons, Trade Unionism and Labor Problems, p. 224.

^b Ibid., p. 226.

^c \$1.05 per 100.

In the minor branches of the slaughtering industry the division of labor is equally minute. Thus, among the beef boners there are as many as 25 occupations enumerated in the union wage scales, the highest paid receiving not more than 30 cents per hour. The sausage makers comprize 13 different occupations, and in the dry-salt department there are from 10 to 14 different occupations.

Besides the elimination of apprenticeship a notable effect of these industrial changes, resulting from the extensive use of machinery and the subdivision of labor processes, has been the constant obliteration of trade boundaries and demarcations.

Formerly the peculiar tools employed in a trade and the material worked up by the artizan were the principal criteria for designating the limits of a trade or craft. Under modern conditions, however, neither the tool nor the material affected nor the article produced can be said to distinguish one occupation from another. Occupations have been multiplied so rapidly and the gradations of skill and workmanship have become so numerous and imperceptible that it is frequently exceedingly difficult, if not impossible, to specify the distinguishing marks and characteristics which separate one group of workers from another. In a few trades, principally in the building trades and others which have not yet been materially affected by machinery and mechanical processes, tools peculiar to the trade continue to form the basis of craft demarcation. The bricklayers and masons, who have been comparatively free from the invasions of mechanical processes, still adhere to the principle that every workman using a flat trowel, whether setting masonry or laying bricks or plastering walls, is within the jurisdiction of their craft.^(a)

The plumbers likewise seek to uphold the principle that tools designate the craft,^(b) while the trade rules of the sheet-metal workers and the boiler makers and iron shipbuilders prohibit laborers and helpers working with them from using the tools peculiar to their occupation.

^a The officers of the Bricklayers and Masons' International Union are endeavoring to discourage this principle. Thus, the secretary in his Fortieth Annual Report (1905) stated:

"No organization of workingmen that we know of has any hereditary or patent rights to the use of the chisel, point or pean-hammer. These belong to the stone masons' kit of tools, as well as to that of the stonecutter. * * * The one thing required, owing to conditions that exist in this country, is simply that the stone mason shall confine his use of these tools to the class or grade of work that properly comes within his province, and which has been conceded and defined as coming under the head of stone masonry. * * * The whole matter is simply a question of trade jurisdiction of certain work. This being adjusted, What does it matter, we ask, as to what tools either workman uses, so long * * * as each confines himself to his own classification of work?"—The Bricklayer and Mason, February, 1906, p. 4.

^b Plumbers, Gas and Steam Fitters' Official Journal, October, 1902, p. 25.

Probably the best example of confining the limits of trade jurisdiction to the use of the same tools is found in the stonecutting industry. The stonecutters, marble-cutters, and granite cutters are organized into separate national trade organizations, owing principally to the fact that each group requires different tools in manipulating the material upon which it works. A man who cuts granite or hard stone has to use certain kinds of tools, and these are not fitted to be used upon soft stone. The steel needs to be of the finest quality and the temper of the best. In the soft-stone industry a different kind of temper and a different treatment of the material is required. It is difficult for any one person to change from the occupation of granite to that of soft-stone cutting, and consequently the trades remain separate and independent of each other.

The manipulation of the same material by workmen of different occupations, tho often forming the basis of trade-union organization, constitutes the principle of craft demarcation in only a few instances. As far as skill and earning capacity are concerned, the different wood-working trades are separated even farther from each other than the different stonecutting trades. Machine woodworkers are composed chiefly of comparatively unskilled and poorly paid workingmen; whereas house carpenters and cabinetmakers, tho comprizing various grades of skill and workmanship among their members, are, on the whole, a higher class of mechanics; and pattern makers (who, besides the manual dexterity required in cutting patterns from wood, must possess a thoro knowledge of mechanical drawing and designing and also know something of metal molding) rank among the highest grades of skilled artizans.

Similarly, in the garment-making industry, the gradations between the different groups of workers are numerous, tho they are comprized under one international trade organization. The disparities in the earnings of the different grades and the differences in skill and training of each are such as to render inappropriate a grouping under one trade. Likewise in the glass and pottery industries, in boot and shoe making, and in tobacco manufacturing, there are numerous occupations, each separated from the others by differences in the skill, the earnings, and the physical and intellectual qualifications of the workers.

This disintegration of trades and handicrafts, wrought by the introduction of new processes, by machinery, and by the increased subdivision of labor, has had a noteworthy effect upon the organization of labor unions. In some cases it has resulted in uniting into one organization workers of varying degrees of skill, strength, and earning capacity. In other cases it has given rise to serious friction among different groups of workmen, the nature of whose labor is closely related, but who are under separate trade jurisdictions. The former is the so-called industrial type of trade union—that is, a union

comprizing all workers of an industry regardless of disparities in skill and wages—while the second has produced the phenomenon of modern trade unionism known as jurisdictional disputes. Among the leading examples of the industrial type of trade-union organization are the Boot and Shoe Workers' Union, the United Garment Workers of America, and the Amalgamated Meat Cutters and Butcher Workmen of North America. Each of these will be examined in turn.

THE BOOT AND SHOE WORKERS' UNION.

In the early organizations the boot and shoe workers in the United States were separated into a number of independent unions, each occupation having its own association. The cordwainers were organized independently; the cutters also had a separate union; and the lasters were strongly organized under the Lasters' Protective Association, which was the immediate successor of the Knights of St. Crispin. Later these different branches of the shoemaking industry were united into the Boot and Shoe Workers' Union, which was formed in April, 1895, after the revolution in the industry caused by machinery had taken place. According to the constitution of the Boot and Shoe Workers' Union "any male or female boot and shoe worker over 16 years of age and actively employed at the craft is eligible to membership." (^a)

Since its organization the union has taken a conciliatory attitude toward machinery, tho its predecessors had opposed machinery until finally compelled to take a different view. Its policy has been to accept the machines and make the best of them. "Lack of intelligent and comprehensive action when lasting machines were introduced was the one thing which more than all others combined caused the destruction of the once powerful Lasters' Protective Union." (^b) No restrictions regarding machinery, wages, or the subdivision of labor in the industry are made by the present organization of boot and shoe workers, and no apprenticeship regulations are enforced. The general president of the union, in his report for 1899, stated:

Unfortunately the rapid introduction of labor-saving machinery, and the consequent subdivision and simplification of labor to the extent that skill is fast becoming unnecessary, together with the rapid development of the factory system to the point where only large capital can succeed, makes the workers in our craft hesitate as to the advisability of joining in the labor movement, lest their activity in defense of their class may cause offense to their employer and that some more submissive person may secure the coveted job. (^c)

^a Constitution of the Boot and Shoe Workers' Union, 1904, sec. 44.

^b The Union Boot and Shoe Worker, May, 1900, p. 9. Four per cent of the strikes in the boot and shoe industry between the years 1887 and 1894 were against the introduction of machinery. (Report of the Industrial Commission, Vol. XVII, p. 658.) Since then there have been very few strikes under union auspices in the industry.

^c Convention Proceedings of the Boot and Shoe Workers' Union, 1899, p. 4.

To overcome this situation the members were urged to build the strength of the union upon beneficiary rather than defensive principles. In 1899, accordingly, they adopted a policy of high dues and benefits, which still persists in the organization.

In addition to a beneficiary system, the Boot and Shoe Workers' Union relies largely upon the influence of the union stamp for the maintenance of its power. In granting the use of the union stamp to manufacturers the union, however, makes no demands as to wages or conditions of employment, but merely seeks as far as possible to obtain exclusive employment for its members.^(a) The officers of the organization take cognizance of the fact that to enforce higher wages in union shops would lead to the defeat of the organization, competition among boot and shoe manufacturers being so keen that a slight advantage in wages of union over nonunion workmen would compel the employers of the former to go out of business. The efforts of the union are mainly directed toward advertising the union stamp, thereby increasing the demand for union-made shoes. Incidentally the organization seeks also to advance the wages of the lower-paid portion of the craft, so that an equality of earnings may be more nearly established, thus recognizing that one branch of the trade is of just as much wage importance as another and entitled to something like more equal earning capacity.^(b)

THE UNITED GARMENT WORKERS.

This organization comprizes the five principal occupations included in the manufacture of ready-made garments: (1) Cutting; (2) operating or machine work; (3) basting; (4) finishing; and (5) pressing.

CUTTING.

Cutting is considered the most skilled branch of the ready-made clothing industry, having been only slightly affected by machinery. The cutter formerly did his work entirely by the use of shears, and the custom tailors still use this method. It is laborious and expensive, but is well suited for high-grade work. In most clothing factories the present method of cutting is by means of a circular disk or knife operated by electricity and guided by the artizan. This device increases the output of the cutter, but does not replace his skill, since the same accuracy is required in guiding the knife as under the old method.

Previous to the manufacture of clothing on a large scale the greatest skill of the cutter was the designing and the fitting of a garment. In

^a Convention Proceedings of the Boot and Shoe Workers' Union, 1902, p. 9.

^b Ibid., 1904, p. 22. The union stamp is granted to manufacturers of all grades of shoes, since the union endeavors to make the label of actual value to the shoe workers rather than a stamp of superior quality of goods.

merchant tailoring the cutter takes the customer's measure, cuts the goods, superintends the "try on," and acts as foreman. These functions require marked ability, and consequently the cutter who works upon custom-made goods is more highly skilled and better paid than the cutter working upon the factory product. The new class of cutters in factories do nothing but the cutting. They are differentiated from the designers, the men who design the patterns from which the cutter marks off and cuts the cloth. The latter are highly paid artists, but the number required in the industry is very limited.

The importance of the cutter in the clothing trade has been largely diminished by the introduction of standard patterns. These are placed on the goods by the "marker," whose chief skill lies in securing from a given piece of goods a maximum number of suits. The "trimmer" follows with the knife or circular disk and cuts the cloth according to the markings of the former.

Despite this division of labor, the occupations in the cutting department are the most skilled of the clothing trades. Manufacturers have undertaken to introduce workmen of less skill and experience, but such attempts have usually ended in failure.^(a) The cutters are the best organized of the garment workers, and in some localities they have been able to enforce apprenticeship regulations.

OPERATING OR MACHINE WORK.

Division of labor has so affected this part of the work in clothing manufacture that each operator becomes a specialist, working only on a small part of a garment. On coats and heavy material the operating is done principally by men, but on pants and vests women are largely employed.

BASTING.

This consists of the tacking down of the edges and seams of a garment and is still done largely by hand. In this line of work the practise is also to subdivide the labor and to make each worker a specialist. Part of the work of basting, especially on coats, is highly skilled hand work, and the men who do this work must be trained to it and are generally well paid. But the basting of the minor parts, such as the sleeves, lapels, and canvas, requires very little skill, and is done mainly by women and girls.

GENERAL FINISHING.

This work includes felling, tacking, sewing on buttons, and the like. It requires neither physical strength nor training, and accordingly is done by women and children, usually outside the shop. In New

^a Pope, *The Clothing Industry in New York*, pp. 22, 23.

York City it is the occupation of a large number of Italian women, who do the work in their homes, while attending to their household duties. As a whole, finishing is a very small part of the total labor involved in the manufacture of clothing.

PRESSING.

Pressing is almost universally done by men, since it demands a great deal of physical exertion. A subdivision of labor likewise obtains in this branch of the industry, and accordingly there are coat pressers, vest pressers, sleeve pressers, etc., each class trained in its own branch of work, and generally incapable of doing the work of the others. The common form of pressing in clothing factories is by the use of a large flatiron—the “goose”—which is heated on a stove or furnace and applied directly to the goods, without mechanical aid. Much physical exertion on the part of the presser has been saved by attaching the “goose” to a crane or movable arm. Within recent years an innovation in the form of a coat-pressing machine, which can be used in the less complex parts of the work, has been introduced in the trade.^(a)

The policy of the United Garment Workers regarding machinery and the division of labor is very similar to that of the Boot and Shoe Workers' Union. With the exception of the cutting branch of the industry no apprenticeship regulations are enforced, and the union has very little opportunity to impose restrictions regarding the system under which work is to be performed. As with the Boot and Shoe Workers, much reliance is placed upon the union label as a means to obtain better working conditions and to increase the employment of union garment workers.

THE AMALGAMATED MEAT CUTTERS AND BUTCHER WORKMEN'S UNION.

The Amalgamated Meat Cutters and Butcher Workmen's Union of North America, a national organization, contains all the workers in the slaughtering and meat-packing industry, its jurisdiction covering every wage-earner, “from the man who takes the bullock on the hoof until it goes into the hands of the consumer.” The different branches of workers, where sufficient numbers are found in one locality, are organized as separate local unions, but where a sufficient number of each branch is not found in one locality they are combined into a single local organization. The policy of the Amalgamated Meat Cutters and Butcher Workmen's Union has been to organize the unskilled as well as the skilled workers in the industry, and to maintain a relatively high standard rate among the lowest grades. The general strike of the summer of 1904 was caused by a demand for a

^a Pope, *The Clothing Industry in New York*, p. 77.

higher minimum wage for the unskilled laborers. Previous to the strike the union was composed of 50,000 members, of whom 5,500 were cattle butchers; but of these only about 2,000 are of the most highly skilled workmen in the slaughtering industry. Their importance has brought to them the title of "butcher aristocracy." "Their strategic position is explained by the character and expensiveness of the material they work upon. The cattle butchers can do more damage than any other workmen; for a cut in the hide depreciates its value 70 cents, and a spotted or rough carcass will be the last to sell, with the risk of the rapid depreciation of a perishable product."^(a)

When it is impracticable or inexpedient to amalgamate under one national organization all grades of employees in an industry, or different groups of mechanics doing similar lines of work, jurisdictional disputes are not uncommon. These disputes are most frequent and serious in industries in which the labor processes are constantly undergoing change. They have practically disappeared in the textile and mining trades, but are numerous in the building and metal trades, where they are due both to the introduction of new material and the "specialization" of mechanics.

The frequency of quarrels over trade boundaries is a constant source of irritation to the officials of the American Federation of Labor, before whom they come up for adjudication. During 1903, for example, "the Electrical Workers and Machinists objected to a charter being granted to the Elevator Constructors. The Plumbers had disputes with the Metal Workers and the Electrical Workers over the question of conduit work, which was finally granted to the Electrical Workers. The Sheet Metal Workers contended with the Painters as to which union should do the glazing in metallic skylights and sashes, and the United Brotherhood of Carpenters with the Wood, Wire and Metal Lathers over the jurisdiction of wood lathing."^(b)

The origin and character of disputes of jurisdiction or demarcation is exemplified in the shipbuilding industry of Great Britain, concerning which Sidney and Beatrice Webb write as follows:

The gradual transformation of the passenger ship from the simple Deal lugger into an elaborate floating hotel has obscured all the old lines of division between trades. Sanitary work, for instance, has always been the special domain of the plumber, and when the sanitary appliances of ships became as elaborate as those of houses, the plumber naturally followed his work. But, from the very beginning of steam navigation, all iron piping on board a steamship, whatever its purpose, had been fitted by the engineer. Hence the plumbers and fitters both

^a Commons, *Trade Unionism and Labor Problems*, p. 223. The sheep butcher is not so highly skilled as the cattle butcher, because he pulls off three-fourths of the hide, whereas the cattle butcher can pull off only 2 per cent, the remainder requiring to be cut off neatly.

^b *Studies in American Trade Unionism*, edited by Hollander and Barnett, p. 314.

complained that the "bread was being taken out of their mouths" by their rivals.

We need not recite the numberless other points at which the craftsmen working on a modern warship or Atlantic liner find each new improvement bringing different trades into sharp conflict. The Engineers have, on different occasions, quarreled on this score with the Boiler Makers, the Shipwrights, the Joiners, the Brass Workers, the Plumbers, and the Tin Plate Workers; the Boiler Makers have had their own differences with the Shipwrights, the Smiths, and the Chippers and Drillers; the Shipwrights have fought with the Calkers, the Boat and Barge Builders, the Mast and Block Makers, and the Joiners; the Joiners themselves have other quarrels with the Mill Sawyers, the Pattern Makers, the Cabinetmakers, the Upholsterers, and the French Polishers; whilst minor trades, such as the Hammermen, the Ship Painters, and the "Red Leaders," are at war all round.^(a)

One of the most recent of the important jurisdictional disputes in the United States is that prevailing in the plumbing and steam fitting trades. Plumbing, steam fitting, gas fitting, sprinkler fitting, fixture hanging, and pipe cutting are now separate occupations, tho originally all such work was done by the same workmen. With the progress of invention the trade has branched out into broader fields, and the journeymen have become specialists, each following a different line of work. Regarding this disintegration of the craft the president of the United Association of Journeymen Plumbers, Gas Fitters, etc., in his report to the thirteenth general convention, spoke as follows:

Our trade as well as others has been rapidly branching out into unknown fields, so that to-day we have branching from plumbers, gas and steam fitters an array of specialists, such as sprinkler fitters, ammonia pipe fitters, fixture hangers, beer pumpmen, and "ship plumbers," all of which properly belong to and are, in a great majority of cases, graduates of the first-named branch of our trade. While not all of the last mentioned are affiliated with the United Association, they are using the same tools and fittings and should properly affiliate.^(b)

The endeavor of the United Association of Journeymen Plumbers to control all branches of plumbing and steam fitting has led to a jurisdictional dispute with the National Association of Steam and Hot Water Fitters. The International Association of Journeymen Plumbers, Steam Fitters and Gas Fitters was first organized in 1880; went to pieces in 1888, but was reorganized in 1889 as the United Association of Journeymen Plumbers, Gas Fitters, Steam Fitters and Steam Fitters' Helpers of the United States and Canada. The year previous, 1888, the National Association of Steam and Hot Water Fitters and Helpers had been formed, which included men employed in the fitting of engine and boiler connections, and piping for power or

^a Industrial Democracy, new edition, 1902, p. 508.

^b Plumbers, Gas and Steam Fitters' Official Journal, October, 1902, p. 25.

heating purposes, for refrigerating, and for fire extinguishing. The journeymen doing this line of work had previously belonged to the plumbers' locals. Accordingly when separate national organizations were formed a jurisdictional dispute arose, the plumbers claiming that steam fitting was a branch of their trade. Ill feeling has existed between the two organizations ever since. In 1899 a charter was granted by the American Federation of Labor to the National Association of Steam and Hot Water Fitters, with the provision that steam fitters who were members of the United Association of Journeymen Plumbers might retain their membership in the latter organization if they preferred, and that steam fitters might join the plumbers' locals in towns where their number was too small to form a separate union. The United Association of Journeymen Plumbers entered a vigorous protest against the granting of this charter, and have since been seeking to have it annulled.

The jurisdictional disputes in the wood-working trades have grown out of the same conditions as that of the plumbing and steam-fitting trades. The Machine Woodworkers' International Union was formed in St. Louis, August 5, 1890. At that time both the United Brotherhood of Carpenters and Joiners and the International Furniture Workers' Union admitted machine woodworkers to membership, altho neither organization made any special effort to organize this class of mechanics. In 1894 the United Brotherhood of Carpenters conceded to the Machine Woodworkers' International Union jurisdiction over all factory woodworkers, and drew up an agreement with the latter in which the jurisdiction of each organization was defined. In the following year the Machine Woodworkers amalgamated with the International Furniture Workers' Union, thus virtually abrogating the jurisdictional agreement with the carpenters. In October, 1897, a new agreement was made whereby the Machine Woodworkers were given full jurisdiction over all mill hands, except carpenters who might at times be engaged at mill work, and except millwrights and stair builders. The United Brotherhood of Carpenters was to have sole jurisdiction over outside carpentry work and the fitting up of offices and stores.^(a) In 1898 the Carpenters in general convention abrogated all agreements made with other woodworking organizations, and ordered that no such agreements be made in the future and that no other woodworking organizations be recognized. Local and district councils of the United Brotherhood, however, were still permitted to make local agreements with other woodworking organizations by a vote of their members.^(b)

The jurisdictional dispute continued until 1900, when representatives of the Amalgamated Woodworkers presented themselves at the

^a The Carpenter, November, 1897, p. 7.

^b Ibid, October, 1898, p. 1.

general convention of the United Brotherhood of Carpenters and Joiners and tried to arrange an agreement with the latter regarding the limitations of their craft boundaries. The woodworkers claimed, besides all work in mills, the right to put up saloon, bank, and drug store fixtures manufactured in shops under their control. The carpenters refused to grant the claims of the woodworkers, at the same time asserting their jurisdiction over all carpenter work as specified in their constitution, "believing that the division of control by two organizations of one trade can not be tolerated, particularly where the standard of wages of one is lower than that maintained by the other." The Brotherhood was instructed to carry out this recommendation in each locality "in such manner as their best judgment suggests."^a

The present constitution of the United Brotherhood of Carpenters and Joiners provides for the admission to membership of journeymen carpenters and joiners, stair builders, ship builders, millwrights, planing-mill bench hands, cabinetmakers, and men running wood-working machinery. The jurisdiction of the Brotherhood is to extend over all engaged in these occupations, "whether working on the building in its erection or repairs, or employed in the preparation of material for the same." This broad claim, if conceded, would give the Brotherhood control over the members of the Amalgamated Woodworkers, whose field is embraced in the last three occupations named above.

Another instance of how the use of new materials and changes in building conditions may lead to disputes over trade jurisdiction is found in the Bricklayers and Masons' International Union. This union is one of the best organized and most independent of the building trades organizations. In the past it has held itself aloof from the general movements and alliances with which most of the other unions are affiliated. Within the last decade, however, owing principally to the fact that other trades are encroaching upon the work of bricklayers and masons, a strong sentiment of joining the American Federation of Labor has grown up within the union. The necessity is felt of an alliance with an organization which wields some influence in settling jurisdictional disputes. The officers of the union believe that the policy of isolation is inadequate to the rapidly changing conditions of the trade. New materials and processes which formerly did not compete with the bricklayers' and stonemasons' crafts are now competing actively with them. This condition is bringing with it a train of disputes involving endless trouble. Moreover, specialization within the trade is causing secession from the union, as well as the formation of smaller unions of trades which were formerly included in the older union. The Bricklayers and Masons have at present jurisdictional disputes, of more or less importance, with the Stone

^a Report of the Industrial Commission, Vol. XVII, p. 130.

Cutters' Union, the Electricians, the Elevator Constructors, and with the Terra Cotta and Tile Workers.^(a)

Jurisdictional disputes in the manufacturing industries, tho less frequent than in the building and metal trades, produce the same irritation and conflict among organized workers. A recent case of friction caused by the overlapping of craft boundaries in the manufacturing trades is the jurisdictional dispute of the Journeymen Tailors' Union and the United Garment Workers. For several years there has been constant friction between the journeymen tailors and the garment workers as to the proper distinction between custom-tailored and factory-made garments. The new methods which are constantly being introduced into garment manufacturing are continually wiping out the distinct lines which divide one trade from the other. This being true, there naturally arose friction between the unions in the same industry and closely allied to one another. To eliminate this friction and to conserve the best interests of garment workers, a movement has been inaugurated to unite them all into one organization, working harmoniously for a common end.

The journeymen tailors were among the earliest craftsmen to form trade unions in the United States. Even previous to the last century we find records of their organization in New York, Philadelphia, and some other large cities of the eastern coast. In 1872 a national union was formed, but soon went out of existence. The present organization, the Journeymen Tailors' Union of America, was founded in 1893.

The manufacture of clothing on a large scale has not displaced the journeyman tailor. Rather has the ready-made clothing industry taken the place of garment making in the home. Nevertheless, the journeymen tailors have been affected in various ways by the factory system of clothing manufacture. The journeymen tailors, unlike garment workers, endeavor to maintain a sort of apprenticeship system, but owing to a number of causes very few apprentices are found to-day in the custom branch of the clothing trade. One of the principal reasons why boys do not care to remain apprentices to journeymen tailors is the rise of cheap, custom tailoring, known as "special-order work," wherein the "team system" of manufacture prevails. Within recent years large clothing firms doing a regular factory business have inaugurated a system of sending out agents all over the country to solicit special orders for "made-to-measure" garments. This class of work is not done by journeymen tailors, but by a separate class of men, whose skill ranges from that of the ordinary garment worker to that of the custom tailor. Hence, journeymen tailors' apprentices can readily enter this field of work before serving out their full term of apprenticeship. Largely for this

^a Studies in American Trade Unionism, edited by Hollander and Barnett, p. 313. See also The Bricklayer and Mason, February, 1906.

reason the Journeymen Tailors refuse to ally themselves with the "special-order" workers.

The question of assuming jurisdiction over the "special-order" tailors has been voted upon three times in the Journeymen Tailors' Union, and in 1903 was finally defeated, despite the favorable stand taken by the officers of the union. The secretary-treasurer, Mr. John B. Lennon, took the ground that the "team system" of manufacture in custom work does not necessarily mean a deterioration in the quality of workmanship. "This change of system of making custom tailoring from the regular journeyman tailor who made the complete job, to the factory or team system," he said in a recent report, "does not necessarily mean for the average class of work a deterioration as to quality. This has heretofore been the case but I believe largely because of the fact that the regular journeymen tailors would not permit the organization of this class of work under our union, and consequently did not and would not work at it."^(a) Mr. Lennon urged the members to become active factors in the making of this class of work, saying that the efforts of the union to prevent the introduction of the factory method of making custom clothing had been continually disastrous, causing the work of the journeyman tailor to be restricted to a narrow field and resulting in an oversupply of labor and lower wages than formerly.

In 1903, after the refusal of the Journeymen Tailors to admit the "special-order" tailors, the United Garment Workers began to organize these workmen under a separate classification. An agreement had been drawn up in 1895 between the two organizations, whereby the Garment Workers were granted jurisdiction over "special-order" workmen in the United States and Canada, whether working under the system of the "old-time" journeymen tailors or under the factory system, when the average price at which the suit made up was sold in the United States was not more than \$25 and in Canada not more than \$18. Where the price of the suits was higher the workers could be admitted to the Journeymen Tailors' Union.^(b) This arrangement, however, has failed to eliminate friction between the two organizations which, it is hoped, may be eventually accomplished thru federation or amalgamation.

EFFECT OF THE DISINTEGRATION OF TRADES UPON THE SKILL OF THE WORKER.

One of the principal effects of the disintegration of trades has been the gradual breaking down of the barriers which formerly separated the skilled from the unskilled occupations. The numerous gradations of skill resulting from the extensive use of machinery and sub-

^a The Tailor, February, 1905, p. 6.

^b Ibid., p. 7.

division of labor render it extremely difficult to classify laborers into noncompetitive groups, each upon a different plane from the others. Various classification of such industrial groups have been offered from time to time by economists. John Stuart Mill was the first English economist to attempt to grade and classify occupations into separate groups. Imprest by the difficulties which beset a parent in an attempt to bring up his son in an occupation widely different in character and of a higher grade than his own, Mill wrote concerning the different industrial groups as follows:

So complete, indeed, has hitherto been the separation, so strongly marked the line of demarcation, between the different grades of laborers, as to be almost equivalent to an hereditary distinction of caste; each employment being chiefly recruited from the children of those already employed in it, or in employments of the same rank with it in social estimation, or from the children of persons who, if originally of a lower rank, have succeeded in raising themselves by their exertions. The liberal professions are mostly supplied by the sons of either the professional, or the idle classes: the more highly skilled manual employments are filled up from the sons of skilled artisans, or the class of tradesmen who rank with them; the lower classes of skilled employments are in a similar case; and unskilled laborers, with occasional exceptions, remain from father to son in their pristine condition.^(a)

According to the above statement of Mill, industrial society may be roughly divided into four groups: (1) Liberal professions, (2) skilled manual employment, (3) the lower class of employed artisans, and (4) the unskilled, common laborers. Tho these four groups were held to be practically noncompetitive, Mill nevertheless recognized a tendency toward the breaking down of the barriers which separated one from the others.

Mill's classification of industrial groups was adopted by the English economist, John Elliott Cairnes, the latter emphasizing the noncompetitive character of the different groups. The classification of Sidney and Beatrice Webb, which differs only slightly from that of Mill and Cairnes, distinguishes the character of the four industrial groups as: (1) Manual work, (2) routine mental work, (3) artistic work, and (4) intellectual work.

A classification very similar to the above but more suited to our existing conditions is given by Prof. Franklin L. Giddings. His divisions are: (1) Automatic manual labor, including common laborers and machine attendants; (2) responsible manual labor, including those who can be trusted with some responsibility and labor of self-direction; (3) brain workers, such as bookkeepers; (4) responsible brain workers, including superintendents and directors.

^a John Stuart Mill, *The Principles of Political Economy*, New York, 1883, Vol. I, p. 480.

All the above classifications are open to the objection that they draw broad lines of division, which under actual conditions do not exist. The numerous gradations, not only among workers practising the same trade, but in industrial society as a whole, do not permit a strict classification of separate industrial groups. Certain classes of workers in the manual occupations, however, have similar characteristics and are on the same social and industrial plane as regards skill and apprenticeship. Confining ourselves accordingly to manual trades we may roughly divide industrial workers into two categories:

(1) Those who, from their natural ability or training, have become proficient in all branches of a trade or craft; men who are not only able to do the finer kinds of work, but because of their training and skill, are also able to perform their work intelligently without the constant supervision and direction of others. These men receive relatively higher wages in all countries, and by their skill are enabled to adjust accurately their tools to the machinery and manipulate them so that the work may be turned out with accuracy and rapidity.

(2) The second category comprises the bulk of the unskilled workers; men who have not the ability or who are not sufficiently trained to become skilful mechanics. These men have not the knowledge or ability to intelligently perform all the processes of a trade, but when given a simple service to perform, or when placed in charge of a machine to which the material is adjusted, they are able to turn out accurate work, and one of them, in some cases, may take charge of several machines. If a man of this class is intelligent and is rapid as well as accurate in his movements, he may in time acquire a skill which may increase his earnings to that of the trained mechanic.

The problem, however, is complicated by the difficulty of defining skill. Under modern conditions, skill implies not only manual dexterity, but speed and accuracy. It is measured not only by the quality of the product, but also by the quantity of the product. While there is a certain degree of skill and intelligence required in the commonest kind of labor (the terms "skilled" and "unskilled" labor are relative terms), nevertheless, in the sense in which the term "skilled" and "unskilled" are used, unskilled labor is generally understood as that labor which does not require experience in order to perform it with a degree of efficiency and rapidity of movement that will enable it to give the satisfaction desired by the employer. Skilled laborers, on the other hand, are those who have sufficient experience and training in the character of the work which they perform to do it both efficiently and speedily. The effect of new processes and machinery in modern industry has been to enhance quantitative skill, while decreasing the relative importance of qualitative skill. Quantitative skill implies close application and the possibility of the worker enduring intense nervous strain. Qualitative skill, which we

more generally recognize in the skilled worker, implies both manual dexterity and a thoro knowledge of the processes of a trade.

Whether the evolution of modern industry is tending to displace manual skill by intellectual skill is a mooted question with economists. Prof. Alfred Marshall, a leading English economist, maintains that manual skill is losing importance relatively to general intelligence and vigor of character, and this skill with which we are familiar nowadays we do not often recognize as skill.

In districts in which manufactures have long been domiciled, a habit of responsibility, of carefulness and promptitude in handling expensive machinery and materials becomes the common property of all; and then much of the work of tending machinery is said to be entirely mechanical and unskilled, and to call forth no human faculty that is worthy of esteem. But in fact it is probable that not one-tenth of the present populations of the world have the mental and moral faculties, the intelligence, and the self-control that are required for it: perhaps not one-half could be made to do the work well by steady training for two generations. Even of a manufacturing population only a small part are capable of doing many of the tasks that appear at first sight to be entirely monotonous. Machine weaving, for instance, simple as it seems, is divided into higher and lower grades; and most of those who work in the lower grades have not "the stuff in them" that is required for weaving with several colors. And the differences are even greater in industries that deal with hard materials, wood, or metals, or ceramics.^(a)

Professor Marshall supports his theory that the tendency of modern machine production is to enhance the intelligence of the worker by reference to the development of the watch-making industry in the United States and the introduction of the linotype in the printers' trade. He further states that:

New machinery, when just invented, generally requires a great deal of care and attention. But the work of its attendant is always being sifted; that which is uniform and monotonous is gradually taken over by the machine, which thus becomes steadily more and more automatic and self-acting; till at last there is nothing for the hand to do, but to supply the material at certain intervals and to take away the work when finished. There still remains the responsibility for seeing that the machinery is in good order and working smoothly; but even this task is often made light by the introduction of an automatic movement, which brings the machine to a stop the instant anything goes wrong.^(b)

^a Marshall, *Principles of Economics*, Vol. I, p. 261.

^b *Ibid.*, p. 316. Professor Marshall's opinion is supported by Mr. Sydney Chapman, in a work entitled *The Lancashire Cotton Industry*, p. 83, who writes: "The more automatic the machinery the more exacting on the whole is the call made upon the intelligence of the operatives. For automatic machines are probably complicated and possibly delicate and expensive. The operatives managing them must understand them if the best results are to be secured. The perfecting of machinery, therefore, must ultimately be accompanied by a demand for more thoughtful, better educated and more highly paid labor."

Prof. John A. Hobson differs from Professor Marshall in regard to the effect of machinery upon the intellectual skill of the artizan. He holds that the machine operator does not necessarily require a greater display of judgment than the hand worker. Such higher intellectual judgment is possessed by the inventor rather than the machine attendant. He admits, however, that—

The growth of machinery has acted as an enormous stimulant to the study of natural laws. A larger and larger proportion of human effort is absorbed in processes of invention, in the manipulation of commerce on an increasing scale of magnitude and complexity, and in such management of machinery and men as requires and educates high intellectual faculties of observation, judgment and speculative imagination. Of that portion of workers who may be said, within limits, to control machinery, there can be no question that the total effect of machinery has been highly educative. Some measure of these educative influences descends even to the "hand" who tends some minute portion of machinery.^(a)

Again, in speaking of the effect of machinery in industry, he says:

The growth of machine industry then may be measured by the increased number and complexity of the processes related to one another in the mechanical unit or machine, and by a corresponding shrinkage of the dependence of the product upon the skill and volition of the human being who tends or cooperates with the machine. Every product made by tool or machine is qua industrial product or commodity the expression of the thought and will of man; but as machine production becomes more highly developed, more and more of the thought and will of the inventor, less and less of that of the immediate human agent or machine tender is expressed in the product.^(b)

The almost universal opinion of workingmen is that machinery tends constantly to lower the skill of the workers. Thus Mr. T. V. Powderly, former general master workman of the Knights of Labor, at the Sixth Annual Convention of Labor Commissioners, in Indianapolis in 1888, said:

It is neither profitable nor encouraging to learn a trade when the chances are that some morning the mechanic will awake to find a machine standing in his place doing the work which he performed the day before. Inventions have been introduced so rapidly and extensively during the last ten years that many trades have been almost revolutionized. The rapid introduction of machinery has a tendency to depress wages; the reduction in wages and the lack of security in workshop management has been the cause of sending many a boy to college who would have gone into the workshop after passing thru the routine of the common public school.^(c)

^a Political Science Quarterly, Vol. VIII, 1893, p. 116.

^b Evolution of Modern Capitalism, p. 49.

^c Quoted in Lavoisier, The American Workman, p. 92. For opinions regarding effect of machinery see Report of the Industrial Commission, Vol. VII, pp. 121, 606, 744, 780.

Mrs. Fanny B. Ames, former factory inspector for the State of Massachusetts, in her testimony before the Industrial Commission, stated that with the invention of machinery unskilled workers are retained as machine workers, while hand labor is continually remanded to higher artistic work.^(a)

Whatever may be the effect upon the general intelligence of the workers, it can not be denied that the tendency of machinery and the new processes of production is to replace the skill of the handicraftsman. A new form of skill, however, may be created, a skill which is dependent largely upon the character of the machines introduced. If the machine or new process is automatic and simple in character, comparatively little skill is generally required of the attendant, tho mechanical skill may be required of the person who adjusts the material to the machine. If, on the other hand, the machine requires care and dexterity in its management, involving a knowledge of its mechanism on the part of the operator, a new kind of skill may be demanded which, in some cases, may be of a higher grade than that possessed by the hand worker. Moreover, where the machine work requires close mental application, severe nervous tension, and rapidity of movement, a "physical" or quantitative rather than qualitative skill may be demanded of the attendant.

MEASUREMENT OF SKILL.

Altho practically it is impossible to apply any single conclusive criterion by which skill may be measured, there are, nevertheless, certain conditions which distinguish the different kinds and grades of labor known as skilled and unskilled. Generally speaking, the skill of an occupation may be determined (1) by the training or experience essential to competency; (2) by the character and social conditions of the workers, and (3) by their standard of earnings. These criteria may be applied either separately or together, each being gaged by the circumstances and conditions which alter or determine its effect. In considering the problem whether skill has increased or decreased in certain trades it will be necessary to sum up the evidence concerning changes in the amount of necessary training, as well as evidence bearing on the character and conditions of the workers, their wages, etc.

TRAINING OR EXPERIENCE ESSENTIAL TO COMPETENCY.

As a general rule a long term of apprenticeship prevailing in a trade denotes a high grade of skill. The time required to learn the trade, however, is not necessarily exactly equal to the prescribed apprenticeship fixed by employers and unions in the different trades,

^a Report of the Industrial Commission, Vol. VII, p. 60.

since conditions other than the skill essential to the craft may determine the apprenticeship period enforced by a trade organization. The period fixt by several American unions is frequently alleged to be excessive and artificial.^(a) The five years' term of the Glass Bottle Blowers' Association, for example, is enforced only as a concession to the employers, who are enabled thereby to employ a journeyman at apprenticeship wages. An apprentice glass-bottle blower generally becomes efficient inside of half the term of apprenticeship.^(b)

Similarly the term of apprenticeship for a kiln man in pottery is fixt by the union at three years; but the most radical of the employers declare "that an apprentice is a kiln man in one year if he is ever going to be."^(c) The three years of apprenticeship of the Cigar Makers' Union under modern conditions is likewise held to be excessive and is enforced only in exceptional cases.^(d) Immigrants after a few weeks' instruction are enabled to roll cigars with moderate speed and accuracy, and after a few months of steady practise become proficient in their line of work.

A number of national trade unions seek to prevent the excessive exploitation of apprentices by employers, insisting that apprentices receive journeymen's wages at the termination of the apprenticeship period fixt by the union rules. The endeavor, likewise, is to have the earnings of the apprentice increased at successive periods during the term, so that in the last months of apprenticeship his earnings will approach the journeymen's scale. Thus the Dish Makers and Pressers, who are an important branch of the Brotherhood of Operative Potters, endeavor as far as practicable to limit the apprenticeship period in their trade to five years, and insist that

^a Ex-Commissioner of Labor Carroll D. Wright testified before the Industrial Commission that it was claimed by some writers that the old system of apprenticeship under modern conditions had become in a certain sense robbery of the apprentice, who is kept on apprentice work long after he had become a skilled laborer.—Report of the Industrial Commission, Vol. VII, p. 18.

^b Report of the Industrial Commission, Vol. VII, p. 110. See also Eleventh Special Report of the Bureau of Labor, p. 639. In his report to the twenty-sixth convention of the Glass Blowers' Association President Denis Hayes stated that "No one will attempt to controvert the fact that compelling an apprentice in the bottle trade to serve five years for half pay is an injustice, not only to the boy himself, but to the journeymen, whose labor he often displaces."—Proceedings of the 26th Annual Convention of the Glass Bottle Blowers' Association, 1902, p. 50.

^c See Eleventh Special Report of the Commissioner of Labor, p. 672. In reply to this union officials say, as regards the mere matter of placing saggars in a kiln, it is true, but "should any problem of economic kiln filling arise or anything happen by which the responsibility of placing the ware in the kiln fell upon this man and an unusual assortment of ware be presented, he would lose the firm more in a week than they should ever hope to gain by having their own way about apprentices."

^d Eleventh Special Report of the Commissioner of Labor, p. 581; also Report of the Industrial Commission, Vol. VII, p. 181.

thereafter the apprentice receive journeymen wages. The Glass Bottle Blowers' Association likewise limits the period to five years, while the stonecutters', bricklayers', cigar makers', and pattern makers' unions do not permit an apprentice to serve longer than the term stated in the constitution of the international organization.^(a)

Probably a better test of skill in a trade than that of the term of apprenticeship as fixed by employers and trades unions is the experience and practise that is ordinarily required for advancement from the lower to the higher grades of workmanship in a craft. Progression within a trade permits a boy to move from the simpler to the more complex operations at a rate commensurate with his diligence and dexterity, thus giving those who have extraordinary ability or who apply themselves earnestly to their work an opportunity to pass rapidly thru the various stages of apprenticeship. Consequently the so-called "helper system" of entrance to a trade, as we shall explain later, is more adapted to modern conditions than the apprenticeship system. By the "helper system" is meant the process of "moving up" the person desiring to become a proficient mechanic in a trade or occupation. The "helper" as a beginner does the simpler kinds of work, but as he gains experience he gradually acquires sufficient application and proficiency to enable him to work upon the more complex processes of the craft. The essential distinctions between this system of promotion and that of apprenticeship is that no formal instructions are given the "helper" and no definite period of training is required.

CHARACTER AND SOCIAL CONDITIONS OF WORKERS.

The character and social conditions of workers afford a rude test of the skill required in their trade. Men of a high order of intellectual powers and manual dexterity and judgment as a general rule avoid entering the lower grades of unskilled occupations, especially when they have the opportunity of adapting themselves to more remunerative employments. Accordingly, when new processes in a trade result in a loss of skill or a decline of the manual and intellectual requisites on the part of the worker, they who were formerly occupied therein either continue to ply their trade under the old methods or abandon it altogether.^(b)

Owing largely to this reason the unskilled trades, or trades in which skill is declining, are largely recruited, especially in the United

^a The controversy between journeymen and employers over apprenticeship is seldom concerned with the length of term of apprenticeship. The disputes are generally about the number of apprentices permitted in the trade.

^b "Where skilled labor is replaced by unskilled, the paramount importance of maintaining the standard of life warns off the hand worker, both from any claim to work the new process and from any attempt to compete in cheapness with machine work."—Webb, *Industrial Democracy*, new edition, 1902, p. 427.

States, from country laborers or unskilled immigrants. The history of the textile industry "will serve to remind us that many of those who perform the more monotonous parts of manufacturing work are as a rule not skilled workers who have come down to it from a higher class of work, but unskilled workers who have risen to it. A great number of those who work in the Lancashire cotton mills have come there from poverty-stricken districts of Ireland, while others are the descendants of paupers and people of weak physique, who were sent there in large numbers early in the century from the most miserable conditions of life in the poorest agricultural districts, where the laborers were fed and housed almost worse than the animals whom they tended."^(a)

The position of the unskilled immigrant in industry is very similar to that of a boy who must start out to earn his own living, but who can not afford either the time or the expense involved in acquiring a skilled occupation. He accordingly seeks employment that demands very little experience or previous training as a requisite for competency, but which insures an immediate income sufficient for a livelihood. As a general rule, newly arrived immigrants, when accepting employment, have little regard for the possibilities of the future industrial betterment which such employment offers. Their prime object is to acquire an industrial foothold without the loss of time and effort involved in preparation for an industrial career. Accordingly, the bulk of immigrants enter such employments which, owing either to the extensive use of machinery or to subdivision of labor, require on their part little previous training or intellectual equipment.

The immigrants who enter the unskilled employments must be distinguished from foreign mechanics who have received their industrial training abroad, and who are enabled thereby to resume their occupation in this country. Immigrants entering the stonecutting trades, for example, are generally skilled workmen, mostly Italians, who have served an apprenticeship in their native land. It has been the custom for these foreigners, known as "harvesters," to come to this country during seasons of prosperity and work at stonecutting until the dull season sets in, when they return to their homes. Mr. D. F. Kennedy, testifying before the Industrial Commission, stated that in the stonecutting trades three-fifths of the workers learned their craft in the old country.^(b) The native stonecutters were formerly much injured by the competition of these foreigners, and in order to discourage their immigration the union requires from foreign stonecutters an initiation fee of \$50, whereas Americans are charged but \$10.

^a Marshall, Principles of Economics, Vol. I, p. 325.

^b Report of the Industrial Commission, Vol. VII, p. 745.

In view of the large influx of unskilled foreigners the number of skilled mechanics who come into this country is relatively insignificant. The restrictive policy of trade unions regarding admission of foreigners, together with the alien contract labor law, tends to discourage the immigration of skilled mechanics to the United States.

The most important of the modern industries which have been largely invaded by unskilled immigrant labor are: (1) Cotton manufacturing; (2) clothing manufacturing; (3) slaughtering and meat packing; (4) coal mining; (5) boot and shoe making, and (6) machine woodworking. Machine stonecutting and machine iron molding are also being rapidly taken over by immigrant laborers, since in these trades the hand workers do not adapt themselves to the machines.

The textile industries for more than half a century have been a favorable field for cheap immigrant labor. The lowest paid operatives in the New England States are in the textile cities and work in the textile industries. Requiring a comparatively low grade of skill, the work in textile mills takes a class of people as operatives that would not be in demand in other industries requiring higher education and better opportunities. Practically the only native operatives in the cotton mills at the present time are found in the South. In other sections immigrants are employed as operatives almost exclusively. The earliest immigrants to enter cotton mills were the Irish, Scotch, and English. These have been largely displaced in the lower grades of work by French Canadians, and by Portuguese, Poles, and other nationalities from eastern Europe.

The character of the population in the New England cotton-mill towns is almost entirely foreign. The percentage of native-born Americans among cotton-mill employees is exceedingly small, and these are found generally in the higher positions. Thus, in the last census, it was shown that the population of Fall River, 104,863 people, contained only 14,619 of native American parentage. Of the rest, 17,000 were of English, 18,000 of Irish, and 30,000 of French Canadian parentage. The populations of Lowell and New Bedford also are largely made up of persons of foreign parentage.

The recent mechanical improvements in cotton spinning and weaving, including the automatic loom with warp stop-motion attachment and the ring spinning frame, are mainly responsible for the displacement of the former operatives by immigrants. "The nationality of the operatives is changing, and the workers on the whole are not considered as efficient or as thrifty as in the past. Some time since the textile foreign population in Massachusetts was largely English, but we find them supplanted by French Canadians, who in turn gave way largely to the Portuguese. Now the Poles, Jews, and Greeks are being employed in large numbers at textile work." It is asserted by the manufacturers that the introduction of this unskilled, inex-

perienced labor into the mills is not desired by them, but "they claim to be practically forced into the position on account of the scarcity of help which * * * is prevalent in all textile centers."^(a)

In earlier times many of the immigrants from England and Ireland who entered the cotton mills were previously trained in the work and consequently were well adapted to it. At present there is very little immigration of this class of skilled operatives. The newcomers in the industry are largely inexperienced and unskilled immigrants, regarding whom Mr. T. M. Young writes as follows:

Compared with the Lancashire standard, the mill labor obtainable at Fall River is dear and bad—dear because America is now riding on the top of a wave of commercial and industrial prosperity, employment is plentiful, and the standard of expenditure for every class is high; bad because everybody there is climbing up the social ladder as fast as he can, and the cotton industry, being one of its lowest rungs, receives the beginners. Even a good mill in New England loses 5 per cent of its work people every week, and has to find substitutes. There are towns in Massachusetts whose cotton mills thirty or forty years ago were filled with American-born work people of a very good class, earning wages higher than are paid even to-day. As wages gradually fell by successive "cuts" to the low level of 1898 these towns were swept by waves of foreign invasion. Weavers from England and Scotland first drove out the Americans, only to be driven out in their turn by an army of Irish. The Irish began after awhile to be troublesome, and crowds of French Canadians were summoned from over the borders to take their places. Even the docile "Kanucks" have now given way in some places to Portuguese, Greek, and Syrian immigrants, and the mill superintendents are wondering what will come next. I have seen in some mills notices printed in four languages and orders given by gestures or thru interpreters. The labor displaced by immigration rises to better things, and the expansion of American industry provides at present openings for all.^(b)

The rapid movement of immigrant labor, not only from place to place, but also from trade to trade, makes it difficult to organize operatives in the cotton mills. The "mule" spinners alone (mule spinning being a skilled craft) are well organized, but mule spinning is being gradually abandoned in favor of ring spinning, for which cheap, unskilled female labor can be employed.

The development of the clothing industry in the United States is likewise producing changes in the character and skill of the operatives. The most noteworthy effect of the continuous process of subdividing the labor among garment workers has been the introduction of less skilled immigrant labor in the industry. The Jewish immigrants displaced the native and the Irish garment workers who did their work in their homes, each operator making the entire garment complete. Within recent years the tendency has been for Italian immigrants to

^a Bulletin of the Massachusetts Bureau of Statistics of Labor, No. 37, p. 186.

^b The American Cotton Industry, p. 12.

replace Jewish immigrants, especially in factories where a minute system of division of labor prevails. The Italian, when he first comes to this country, is willing to work for less wages than the Jewish garment worker. According to the Report of the Industrial Commission:

The Italian tailor in his own country receives only about one-half the wages received by the Russian, Polish, Hungarian, and Roumanian Jews in their own countries, and about one-quarter of the wages paid for similar grades of work in western Europe. Consequently, in the United States, with his standard of living, he can successfully compete with the newly-arrived Russian Jew and four to one against the newly-arrived German or Englishman. The Russian Jew who is not a tailor, but learned his work in this country and works in the shop as operator or presser, is usually from the stock of small business men in the old country, who have a fairly good standard of living, and is regarded among the clothing workers as of the better class. He will insist on better living and higher wages for his particular kind of work than the tailor.^(a)

Another advantage which the Italians have is the employment of their wives and sisters. The Italian and his wife will work in the shop together. If he is a pants operator she becomes his helper, or if he is a coat maker she is his baster and finisher. The labor of both covers the expenses of the family. In the case of the Jews, the Jewish woman will not work in the shop after she is married. Thus the Italian and his wife can work together for the same price which the Jew will demand for his labor alone, and in this way the Italian is able to displace the Jew in the garment trades.^(b)

A similar substitution of races arising from changes in labor processes has taken place in the bituminous mining industry. Mining machines have displaced a large number of soft-coal miners and increased the number of unskilled men in the mines. With the exception of the machine operators, who must be trained in their work, practically no other skilled worker need be employed in the mining of coal with machines. Under the hand system one man undercuts by hand and takes the coal down by hand, and does everything; but with the use of the machines the labor is subdivided, thus leading to an influx of unskilled immigrant workers whose only qualification is the power of great physical endurance.

In the machine mine it takes seven or eight men to perform these various functions, and, in the mine as in the mill, the machine is the master and the men are its servitors. The operator of the mechanism simply directs its energies, when the motive power is given to it, and the coal is undercut or mined; the blaster follows with drills and explosives to loosen the mass; the loaders reduce it and shovel it into pit cars; the timbermen follow and prop the roof which no longer has the mineral to rest upon; laborers assist in every process, and a

^a Report of the Industrial Commission, Vol. XV, p. 325.

^b Ibid., p. 326.

machinist is retained for repairs. Each one does his certain portion of the work and no more, and doubtless does it better as well as faster by reason of his greater skill thus acquired. * * * Herein lies the chief value of the machine to the mine owner. It relieves him for the most part of skilled labor, and of all the restraints which that implies; it opens to him the whole labor market from which to recruit his forces, it enables him to concentrate the work of the mine at given points, and it admits of the graduation of wages to specific work, and the payment of wages by the day.^(a)

Regarding the effect of machine mining upon the character of the mine worker, President John Mitchell stated before the Twelfth General Convention of the United Mine Workers:

If the rapid increase [of machine coal mining] is continued a few years longer the skill now required by those engaged in the mining of coal will be no longer necessary, and instead of being a body of tradesmen or skilled workers we shall become simply coal shovelers, whose only essential qualifications in securing employment will be the possession of a strong back and an abundance of physical energy.^(b)

Mr. Mitchell, in his testimony before the Industrial Commission, stated emphatically that the men employed in machine mining do not require as much experience and skill as is required in hand mining.

It takes two men to handle the machine. That requires the skilled men, but after that is done it requires unskilled men, because they only load the cars; because they only shoot it down, and what is required most is a man with a strong back who can shovel lots of coal.^(c)

The fact that the relative proportion of unskilled to skilled labor is increased by the use of coal-mining machines has caused a lower grade of workers to enter the bituminous mines. The coal-mining industry of the United States has been a field peculiarly affected by the influx of fresh immigrants, but in the earlier days these were composed largely of Scotchmen, Welshmen, and Irishmen who had had previous experience at mining. Under the present system of mining the immigrant requires no previous experience, and consequently we find inexperienced Italians, Slavs, and often Negroes taking the place of the Scotch, Irish, and American miners. In Illinois the Slavs predominate. The great majority of them have entered this field since 1894, their introduction being brought about thru the general strike of the American and western European miners. According to Professor Commons:

The English-speaking miners universally show an inclination to keep Slavs and Italians from coming into the mines, and their immigration has been very slight since 1897. Practically the only way in which the Slav coming from the old country can now get employ-

^a Fifth Biennial Report of the Illinois Bureau of Labor Statistics, 1887-1888, p. 340.

^b Proceedings of the Twelfth Convention of United Mine Workers of America, p. 46.

^c Report of the Industrial Commission, Vol. XII, p. 55.

ment as a miner is thru the intervention of a relative or friend who agrees to be responsible for him. The State law requires two men to work together in a "room," and the miners' union requires them to share their earnings equally. Consequently a new miner who wants work must find an old miner who will teach him and share with him. This naturally is not easy to do. Furthermore, he must serve a year's apprenticeship above ground as a laborer before going below. This applies to miners proper who are paid by the ton. A different restriction * * * exists for "mine workers," who are paid by the day.^(a)

The Mine Workers' Union endeavors to organize all workers in the coal mines regardless of their skill or nationality. The English-speaking miners, however, do not look with favor upon the large influx of immigrants into the unions.

The substitution of races in the slaughtering and meat packing industry has been an almost continuous process during the last twenty years. About 1886 the workers were American, Irish, and German. After that date the Bohemians entered in large numbers, few of them having begun work as early as 1882. The Bohemians worked their way forward until, after a few years, one-half of the killing gangs were Bohemians, the others being Germans, Irish, and Americans. The Americans as wage-earners have been driven practically out of the stock yards, and are being followed by the Irish and German. Those who have accumulated money leave for something more certain. According to Professor Commons:

The older nationalities have already disappeared from the unskilled occupations, most of which now are entirely manned by Slovaks, Poles, and Lithuanians. The Poles began to appear at about the same time as the Bohemians, tho not in as large numbers; and they have not advanced in the same proportion. The Slovaks and Lithuanians were first seen in 1899. One Slovak who has been in the yards ten years has worked himself up to a 50-cent job; but he is exceptional, and these two races have as yet only shared with the Negroes the unskilled positions. The Negroes first came during the strike of 1894, when many were imported from the South and large cities.

* * * * *

The substitution of races has evidently run along the line of lower standards of living. The latest arrivals, the Lithuanians and Slovaks, are probably the most oppressed of the peasants of Europe; and 18 cents for a day of twelve or fourteen hours in the Carpathian foothills becomes 18 cents an hour in the stock yards. Even with only four days' work a week, the Slovak's position is greatly improved, for in Uhrosko he had no work in winter. Yet his improved position shows itself, not in more expensive living, but in fabulous savings gained by packing sometimes as many as 12 persons in three rooms, taking in boarders, and sending his children to work. The new arrivals of

^a Commons, Trade Unionism and Labor Problems, p. 344.

this class of labor swell the ranks of the thousands waiting at the packing-house gates every morning.^(a)

Machinery, breaking down the apprenticeship regulations, has been partly responsible for the introduction of unskilled immigrant labor into the boot and shoe industry. In 1900, according to testimony before the Industrial Commission, probably 85 per cent of the workers were native born.^(b) The declines in wages that had occurred in the industry up to that time were ascribed to the rapid introduction of machinery and to lack of organization, due to the mixt nationalities which had entered the trade. In addition to the Irish, Germans, and French Canadians of earlier years, Armenians and Italians have recently been introduced in the boot and shoe industries in limited numbers. In the West, Swedes, Norwegians, Germans, Irish, and English are largely employed in boot and shoe factories. The French Canadians were the first immigrants brought into the boot and shoe industry, and they still form a large and important element in the membership of the organization. The Boot and Shoe Workers' Union publishes its journal partly in French to reach this class of workers.

In the woodworking and furniture industries also the enormous development in recent years of the factory product has been accompanied by a corresponding influx of immigrants. Work which the carpenter formerly executed at the place of building is now prepared beforehand in factories, and these factories are manned to the extent of 50 to 75 per cent by foreigners. The woodworking factory is essentially a machine industry with unskilled labor. This industry is located principally in Illinois, Michigan, and Wisconsin. In the furniture factory the greater number of workmen are merely feeders of automatic machines. In this way a large number of immigrants are employed, and often women and children find places. In cabinet-making 50 per cent are Germans, who are considered the best men in the trade, and 25 per cent are foreigners of other nationalities, while 25 per cent are native born. In furniture factories in country districts in Wisconsin the Germans have worked at a wage as low as 50 cents a day, their women also doing carpenter work at the bench.^(c)

Cigar making was never a highly skilled trade except for the better grades of work, and consequently has been ever since the beginning largely performed by foreigners. The first immigrant cigar makers in the United States were principally Cubans and Spaniards, who did a high grade of work. These have been largely replaced by Bohemians and other European immigrants. The immigrants as a rule do not serve an apprenticeship, but are taught the trade in nonunion shops, usually by small manufacturers in the same manner

^a Commons, *Trade Unionism and Labor Problems*, pp. 246-248.

^b Report of the Industrial Commission, Vol. XV, p. 422.

^c *Ibid.*, pp. 423, 424.

as garment workers in large cities receive their instruction. After working a few years on the cheaper grades of cigars in nonunion shops, and when they have become proficient enough to do finer grades of work and earn the union scale, they join the organization. There is at present a school in New York for teaching cigar making. It was established in 1898, and now trains annually about 400 persons, most of them women and girls. The charge for instruction is \$10, but some who plead poverty are charged only \$5. An immigrant learning both "bunch making" and "rolling," and changing from one to the other, requires usually about three months to become sufficiently proficient to turn out a marketable product. At the end of about four weeks, however, most of the pupils leave the school and seek employment in the shops, either as "bunch makers" or "rollers."

THE EMPLOYMENT OF WOMEN AND CHILDREN.

The displacement of men by women or children is generally an indication of loss of skill in a manual occupation. Since their industrial activity is usually ended in marriage, women, as a general rule, do not care to undergo a long and rigid training in preparation for an industrial career. Their position in the industrial world, therefore, tho somewhat analogous to that of the unskilled immigrant, is peculiar. As stated by Prof. John A. Hobson:

A large proportion of the woman's industrial career is occupied in acquiring the experience which makes her a valuable worker, and the probability that, after she has acquired it, she may not need to use it, diminishes both directly and indirectly the net value of her industrial life; the element of uncertainty and instability prevents the advancement of competent women to posts where fixity of tenure is an important factor.^(a)

Owing to these reasons women workers rarely enter the highly skilled manual trades. They accordingly replace men only in such occupations where little training and practise is required for proficiency.

The employment of women in industry, moreover, is limited further by the fact that many occupations are unquestionably beyond their physical powers. The tendency to increase the speed of machinery and strain the nervous powers of the operatives is undoubtedly the foremost deterrent to the replacement of men by women in the important manufacturing industries. This will be explained more fully by an inquiry into the employment of women in such industries as (1) cigar making, (2) clothing manufacturing, (3) cotton manufacturing, (4) boot and shoe making, and (5) printing.

Cigar manufacturing offers a good illustration of an industry in which female are steadily replacing male workers, owing both to the

^a Evolution of Modern Capitalism, p. 302.

fact that the labor therein has suffered loss of skill and that comparatively little physical strain is demanded of the operative. The cigar-making trades were first entered by women and children when, in the early seventies, the introduction of the "mold" gave rise to the system of division of labor or "team work," known as "bunch and filler breaking." From that time the number of women workers steadily increased. When the "suction tables" came into use as a device for assisting in the rolling of cigars by hand, the employers early instituted the practise of having them operated by females in place of males. The number of cigars produced by the suction table has been constantly increasing relatively to the handmade product. Consequently the increase of women workers has been more rapid than that of male employees. This is partially shown in the following table of the number of male and female workers in cigar and cigarette manufacturing in the United States at decennial periods from 1860 to 1900:

MALE AND FEMALE WORKERS IN CIGAR AND CIGARETTE MANUFACTURING IN THE UNITED STATES AT DECENNIAL PERIODS, 1860 TO 1900.

[From the Twelfth Census, Vol. IX, p. 645.]

Year.	Male employees 16 years of age or over.	Per cent of increase over pre- vious census.	Female employees 15 years of age or over.	Per cent of increase over pre- vious census.
1860.....	7,266	.....	731	.....
1870.....	21,409	194.6	2,615	257.7
1880.....	40,099	87.3	9,108	248.3
1890.....	59,452	48.3	24,214	165.9
1900.....	62,168	4.6	37,762	53.0

Undoubtedly the rapid increase in the number of females employed in the production of cigars and cigarettes is due partly to the development in cigarette manufacturing as well as to the extensive use of machinery. The relative production of cigars and cigarettes at decennial periods from 1870 to 1900 is as follows:

PRODUCTION OF CIGARS AND CIGARETTES AT DECENNIAL PERIODS, 1870 TO 1900.

[From the Twelfth Census, Vol. IX, p. 652.]

Year.	Cigars.	Cigarettes.
1870.....	1,139,470,774	13,881,417
1880.....	2,367,803,248	408,708,366
1890.....	4,087,889,983	2,233,254,680
1900.....	5,963,170,381	2,639,899,785

Altho the Cigar Makers' International Union has never excluded female hand workers from membership but few of these are included in its ranks. In the report of the international president, September, 1901, the number of union cigar makers was reported as

38,518, of whom only 3,238, or about 8 per cent were women. These are exclusively "hand workers," since the union does not admit to membership the "suction-table" operators. It is obvious that the percentage of women hand cigar makers in the industry is larger.^(a) The probable reason for the small number of women cigar makers in the union is that women as well as immigrants are employed principally in the manufacture of cheap cigars, a class of work done largely by nonunion cigar makers.

When the machines, combined with the "team system," gradually began to replace the male hand workers on the cheaper grades of cigars, these workers were driven into the finer grades. Clear Havana fillers and other high-grade cigars, which were formerly made exclusively by Spaniards and Cubans, are now made largely by American cigar makers. This class of work is known as "Spanish work," and is much more remunerative than the cheaper grades of work. The principal difficulties in the way of men competing with the machine operators and women workers on the cheaper grades of cigars seem to arise from the lower wages received by the latter.^(b)

The tendency for female to replace male labor as a result of new processes and subdivisions of labor is not so pronounced in garment manufacturing as in cigar making. Women have always actively participated in the manufacture of ready-made clothing. Previous to the introduction of the factory system in this industry they did the work in their homes. Their earnings were then comparatively small, and they literally toiled "in poverty, hunger, and dirt."

The women home workers usually worked on all parts of the garment, but with the coming of the factory system in the early seventies there arose a division of labor following sex lines. Except in the manufacture of overalls, shirts, and other clothing for workingmen, women's labor at present is confined largely to the minor parts. Work requiring skill and physical endurance is now done by men. In 1900, Henry White, the secretary of the United Garment Workers, testified before the Industrial Commission that at least one-fourth of the workers in the garment industry were women.^(c) This ratio, however, includes the women workers upon overalls and workingmen's clothing.

There are certain well-defined parts of the work on men's clothing that are universally performed by women, but there is much of the

^a According to statistics gathered by the Cigar Makers' International Union in 1901 the total number of hand cigar makers in the United States and Canada was 77,101, of whom 22,250 were reported to be females.

^b Altho refusing the privilege of the label to manufacturers using machines, the cigar makers' unions have endeavored on several occasions to organize the machine operators into a separate branch of their organization. They have not succeeded, however, and practically all cigars made by machine are produced by nonunion labor.

^c Report of the Industrial Commission, Vol. VII, p. 182.

labor that may be done by either men or women, the custom varying in different communities. In a community where the cheapest clothing is made, or where it is manufactured on a large scale, the percentage of women employed is the smallest. New York, Pennsylvania, and Maryland, the three leading States in the industry, have a smaller percentage of women workers in the clothing industry than the rest of the United States. Probably the principal reason for the smaller percentage of women in these States is the higher speed maintained by the men workers.

NUMBER AND PER CENT OF WOMEN AND CHILDREN IN THE MANUFACTURE OF MEN'S CLOTHING, FACTORY PRODUCT, IN SIX STATES AND IN THE UNITED STATES, 1900.

[From the Twelfth Census, Vol. IX, p. 263.]

State.	Number of women.	Per cent of total employees.	Number of children.	Per cent of total employees.
New York.....	16,700	40.44	326	0.79
Illinois.....	9,105	69.79	778	5.19
Pennsylvania.....	5,115	48.73	358	3.32
Maryland.....	5,202	53.49	594	6.11
Ohio.....	4,365	66.94	176	2.70
Missouri.....	5,098	83.18	74	1.21
United States.....	69,862	57.76	3,011	2.49

Of the total 120,950 clothing workers in the country at large in 1900, 57.76 per cent were women. Only five States have as low a percentage. "The conclusion which is to be drawn is that while a large part of the work in this industry has been and will continue to be performed by women, a wide extension of this field is characteristic rather of the less important States than of those that have succeeded in dominating this trade. If immigration were to be greatly restricted, however, it is possible that this situation would be altered, since the male labor, which has contributed so largely to the growth of the clothing trade in New York, Chicago, Philadelphia, and Baltimore, is largely that of immigrants." (a)

By far the largest number of women in the clothing industry are employed at basting and finishing, work requiring the least skill and physical exertion. Only when basting is much subdivided and the operations require little skill, such as padding lapels and basting sleeves, is the work relegated to women. The basting of heavy garments and of complicated parts of the work which require skill is

^a Willet, Employment of Women in the Clothing Trade, in Columbia Studies in History, Economics, and Public Law, Vol. XVI, No. 2, p. 55. The work generally performed by women inside the shop is the following: (1) Tacking, (2) felling, (3) edge basting, (4) sewing buttons, (5) basting armholes, (6) padding lapels, (7) hand buttonholing, (8) basting sleeves, (9) basting canvas, (10) operating, (11) busheling, (12) overcasting, (13) finishing, (14) sewing on pockets, (15) pocket making. On pants, inside the shop, the work done by the women is (1) operating, (2) basting, (3) busheling, and (4) sewing on buttons. In the making of vests women are employed in all divisions of the work.

done by men. Skilled women basters (usually Jewish women) are employed on light work, such as basting on vests and pants, work which is within their physical endurance. "From a study of New York City alone it would be natural to conclude either that machine operating and basting on men's clothing was, except in rare instances, beyond the physical strength of women, or that the skill demanded was such as they could acquire only with great difficulty. Yet in other cities women are employed as operators and basters on all but the heaviest grade of goods. In Chicago, for example, there are coat factories in which all the machine work is done by Polish or Bohemian women and girls. In the face of such facts broad generalizations on the subject of the work for which women are suited must be made with great care." (^a)

There is practically only one branch of the work in which women are not found, i. e., the work of pressing. This work is unquestionably too arduous for them.

The proportion of women employed in the clothing factories in New York, according to Mrs. Mabel Hurd Willet, varies in coat shops from 16 to 37.5 per cent of the total employees, averaging about 26 per cent; in the vest shops the average is 48 per cent, and in pants shops as high as 60 per cent. In computing these averages the women finishers who take out work to be done at home are included among the employees. (^b) The effect of outside employment is to scatter the work among a larger number of women than if done in the shop by employees devoting themselves exclusively to the work.

From evidence thus far adduced there seems to be no likelihood that the percentage of women in the clothing industry will continue to increase; first, because of the constant tendency to increase the speed of the workers, thus taxing more and more the physical endurance of the workers, and secondly, owing to the possibility of employing new immigrant male labor more profitably than female labor. Men work more steadily than women, while among certain classes of immigrants, such as Jews and Poles, women work in the factory only so long as they remain unmarried. Consequently, upon reaching a certain age, a majority of them cease to be active workers. In New York fewer women are employed in some of the less skilled branches of the work than one might expect. Pocket making, sleeve making, seam stitching, and other light operations require as much skill as does general operating, and the men performing this work frequently earn high wages. In Chicago, however, the situation is very different from that in New York. The factory system there has been associated from the first with the employment of women as operators. (^c)

^a Willet, *Employment of Women in the Clothing Trade*, p. 67.

^b *Ibid.*, p. 65.

^c *Ibid.*, p. 71.

But it is a well-known fact that the pace set by the Jewish men in the garment industry is one that women have not been able to maintain, and employers have frequently found it more profitable to employ men even on the lighter work, such as basting, which requires little skill and which was done formerly almost exclusively by women.

Yet, despite the above statement, the census figures show that the relative decrease in the number of women workers in the manufacture of men's clothing is less rapid than that of the men workers. Thus, between 1890 and 1900, the men 16 years of age or over employed in the manufacture of men's clothing decreased from 67,786 to 48,077, or 29.1 per cent, while the women workers 16 years of age or over decreased from 75,621 to 69,862, or only 7.6 per cent. These figures are admittedly incomplete.^(a)

The number of children employed in the clothing industry has never been great. The work that children can do is limited to pulling bastings, sewing on buttons, carrying bundles, and the like; operations which are but a small part of the manufacturing processes. It is evident that not many children are employed as operators.

Women and children came into the occupations of boot and shoe manufacturing with the advent of machinery in the industry. As in the manufacture of clothing, however, their field has been limited to a few occupations not requiring strength or physical endurance. A definite tendency of displacement of male by female operatives, however, can be traced. In the New England States such displacement has taken place in comparatively few factories, tho in other sections of the country it is not uncommon to find women and girls operating machines and doing work that was formerly done by men. On the other hand, in the West and South, men and boys have for years been employed in the stitching of uppers and in work performed almost exclusively by women in New England.^(b)

According to the Twelfth Census, the employees in the boot and shoe industry in the years 1880, 1890, and 1900 were divided as follows:

NUMBER OF EMPLOYEES IN THE BOOT AND SHOE INDUSTRY AT DECENNIAL PERIODS, 1880 TO 1900.

[From the Twelfth Census, Vol. IX, p. 741.]

	1900.	1890.	1880.	Percent of increase.	
				1890 to 1900.	1880 to 1890.
Males (over 16 years)	91, 215	91, 406	82, 547	c 0. 2	10. 7
Females (over 16 years)	47, 186	39, 849	25, 122	18. 4	58. 6
Children (under 16 years)	4, 521	2, 435	3, 483	85. 7	c 20. 1
Total	142, 922	133, 690	111, 152	6. 9	20. 3

^a Twelfth Census, Vol. IX, p. 261.
^b Thirteenth Annual Report of the Commissioner of Labor, p. 122
^c Decrease.

It will be noted from this table that the number of females of 16 years of age or over employed in the industry increased 18.4 per cent during the decade between 1890 and 1900, whereas the number of males 16 years of age or over decreased 0.2 per cent. Children employed in the industry increased 85.7 per cent. These figures plainly show that the number of women and children engaged in the boot and shoe industry has been advancing during the last ten years. "To a considerable extent women have taken the place of men in operating the lighter machines, while children now perform work that women were doing heretofore."^(a)

A limit to the increase in the number of women workers in the boot and shoe industry can undoubtedly be explained by the fact that the increasing speed of the worker tends to make labor a race, and that the nervous strain of doing the same thing over and over again as rapidly as possible has a wearing effect. A man operating a heel-nailing machine will nail on as many as forty 60-pair cases of heels in a day—that is, 2,400 pairs or 4,800 shoes, in a day. One not accustomed to it would wonder how a man could pick up and lay down 4,800 shoes in a day, to say nothing of putting them on a jack into a machine and having them nailed on.^(b)

Since the introduction of machinery in the textile industry women and children have formed an important element of the operatives. With the exception of weaving, however, certain occupations (generally those requiring the least skill and physical power) have been taken over entirely by women, and, as in the clothing industry, division of employment is along sex lines. In spite of the fact that female ring spinners are gradually displacing the skilled male mule spinners, there seems to be no tendency for the proportion of women employed in cotton manufacture to increase. In fact, the census figures in the following table show a movement in the opposite direction:

EMPLOYEES IN COTTON MANUFACTURE OF THE UNITED STATES AT DECENNIAL PERIODS, 1850 TO 1900.

[From the Twelfth Census, Vol. IX, p. 27.]

Year.	Men 16 years of age or over.		Women 16 years of age or over.		Children under 16 years of age.	
	Number.	Per cent of increase.	Number.	Per cent of increase.	Number.	Per cent of increase.
1850.....	33, 150	-----	59, 136	-----	-----	-----
1860.....	46, 859	41. 4	75, 169	27. 1	-----	-----
1870.....	42, 790	^c 8. 7	69, 637	^c 7. 4	22, 942	-----
1880.....	61, 760	44. 3	84, 558	21. 4	28, 341	23. 5
1890.....	88, 837	43. 8	106, 607	26. 1	23, 432	^c 17. 3
1900.....	134, 354	51. 2	123, 709	16. 0	39, 866	70. 1

^a Twelfth Census, Vol. IX, pp. 741, 742.

^b Report of the Industrial Commission, Vol. VII, p. 363.

^c Decrease.

The importance of the figures * * * is enhanced by the circumstance that the cotton-manufacturing industry is typical of the factory system in its highest form and on the largest scale. There is scarcely another industry that approaches it in the numbers of hands employed within mills; and the numbers of men and women employed are more nearly equal than is the case with any other industry of a magnitude to be compared with this.^(a)

The relative decline in the number of women employed in the industry during the last decade is undoubtedly due largely to the displacement of female weavers. In fact the tendency "is so marked that the next enumeration should show the men in a majority."^(b) According to the returns of the Census of 1900 (which are considered incomplete) there were 91,515 weavers in the United States, of whom 41,776 were men, 47,941 were women, and 1,798 were children. There are no earlier returns with which to compare these numbers, "but it is well known to those conversant with the industry that only a few years ago the weaving of cotton goods was regarded as peculiarly the work of women."^(c)

Still other causes to which the decline in the relative number of women in cotton manufacture may be attributed are, first, the speeding of machinery, making the work more intense and nerve racking, and, secondly, the displacement of female operatives by male immigrants. The first cause is undoubtedly the more important of the two. Employers and employees may differ as to the difficulty in managing the increased number of machines placed in charge of individual operatives, but it is generally admitted that the work is growing more intense.^(d) The testimony of a representative of the Cotton Weavers' Association before the Industrial Commission shows this increasing strain of work. He said:

Anybody who works in the mills now knows it is not like it was twenty-five or thirty years ago, because the speed of the machinery has been increased to such an extent, and they have to keep up with it. In some mills in this city [Fall River], and probably in other cities in this State, the operative is compelled to turn off so much production per week, and if the production does not come up to the point, he or she is discharged. * * * There was a time when that was not the case. They took their sewing and their knitting along, and there was no anxiety about how much work they could get off, but it is [not] so now. * * * Now they work from the time they go in until they come out.^(e)

^a Twelfth Census, Vol. IX, p. 31.

^b Ibid., p. 33.

^c Twelfth Census, Vol. IX, p. 33. Mr. T. M. Young (American Cotton Industry) cites several instances where, within the same mill, the ordinary looms were operated by women, whereas the improved automatic looms were in charge of male weavers.

^d Report of Massachusetts Board to Investigate the "Subject of the Unemployed," as quoted in Levasseur, *The American Workman*, p. 93.

^e Report of the Industrial Commission, Vol. XIV, p. 578.

The increase in the number of children employed in cotton manufacture, shown in the table on page 726, is undoubtedly due to the expansion of the industry in the South, and does not represent a permanent tendency toward the employment of children in cotton mills.

The printing industry further exemplifies the limitations to the employment of female labor. The high average of speed maintained by linotype operators is the foremost factor in preventing the displacement of men by women in this line of work. When the machines first came into use there was a great fear among the printers that female stenographers would work the machines, a fear arising from the close resemblance of the keyboard of the linotype to that of the typewriter. While it is true that women learn to operate the machines readily they have not the endurance to maintain continually the speed which men maintain. Up to the present time no definite tendency to replace male by female labor upon the machines has appeared. The proportion of female to male operators, according to the latest available statistics, is smaller than the proportion of female to male hand compositors. The following is a statistical table of male and female operators, both union and nonunion, compiled by the secretary of the International Typographical Union for the year beginning January, 1904:

UNION AND NONUNION MACHINE OPERATORS OF EACH SEX AND TOTAL MACHINE TENDERS AND OPERATOR MACHINISTS IN THE PRINTING INDUSTRY, 1904.

Class of employees.	Union.	Non-union.	Total.	Per cent of union of total.
Male machine operators.....	8,526	519	9,045	94.26
Female machine operators.....	325	195	520	62.50
Machine tenders.....	596	31	627	95.05
Operator machinists.....	970	69	1,039	93.35
Total.....	10,417	814	11,231	92.75

In January, 1904, the number of women operating typesetting and type casting machines in the United States and Canada, according to the above table, was 520, about 5 per cent of the total number of linotype operators. The number of women engaged in the United States in 1900 as compositors, according to the United States Census, was 9,617, about 26 per cent of the total number of compositors.^(a) The proportion of nonunion female to nonunion male operators is, however, greater than the proportion of union female to union male operators. The policy of the Typographical Union in insisting that the women workers receive the same compensation as the men doing the same class of work has tended to limit the number of women employed in union printing offices. Employers prefer male to female printers, when the same rate of compensation is demanded by each.

^a Twelfth Census, Vol. II, p. 507.

THE LOWERING OF WAGES AS EVIDENCE OF LOSS OF SKILL.

Altho the lowering of the standard of earnings in a trade or industry is very often an evidence of declining skill, the exceptions are so important as to render this criterion almost nugatory. It is evident that when a labor saving or cheapening invention dispenses, to a limited extent, with any particular trade or calling and the essential work remaining is restricted to a narrow field, or crowded into a certain season, there must be economic waste thru excessive competition of the workers and thru the intervals of enforced idleness on the part of the men who are displaced thereby. This circumstance will result in a lowering of wages until the conditions in the trade are readjusted. The increased productivity of the new process makes possible, however, the payment of a relatively higher scale of wages than formerly, especially when the new process is introduced gradually and the old process competes with it.

The effect of such competition between the product of machine and hand workers is well exemplified in the glass industry. When the fruit jar blowing machine was first introduced, about 1890, the hand blowers endeavored to meet the competition by consenting to work 45 per cent below the scale. This reduction, however, did not prevent the wider use of the machine, tho about 600 hand fruit jar blowers were members of the union at the time of the introduction of the machine. At present practically no fruit jars are made by hand, the disparity in the labor cost between blowing by the hand and the machine processes being such as to eliminate entirely the hand-made product. The displaced hand fruit jar blowers were accordingly compelled to take up other lines of employment or work at lower wages as gatherers and finishers.

The making of milk jars by machinery followed that of fruit jars, but the hand operators did not attempt to compete with the machine. A similar policy is also being pursued in regard to the recently invented beer bottle machine. There are about 1,900 beer bottle blowers in the Glass Blowers' Association, whom it is expected the machine will eventually displace. Since the use of the machine is controlled by one company the product is being introduced gradually, causing only a gradual displacement of the hand beer bottle blowers. The endeavor of the union is to place the hand beer bottle blowers upon other makes of ware, but considerable difficulty is experienced in accomplishing the transition, owing to the fact that the beer bottle blowers are specialists and must undergo a new apprenticeship training when transferred to other lines of work.

Despite the elimination of the skilled hand worker in some branches of the glass industry by the introduction of machinery, no general reduction of wages has resulted. In 1900 it was stated authorita-

tively that the machine operators in the manufacture of lamp chimneys were earning 50 per cent more than the hand workers, averaging \$6 per day.^(a) Bottle-machine operators also earn relatively high wages. At the twenty-seventh annual convention of the Glass Blowers' Association (1903) the machines and the wages of the operators were reported as follows:^(b)

	Per day.
Operators of bottle machines.....	\$4.00 to \$6.00
Operators of jar machines.....	3.50 to 7.00
Operators of finishing machines.....	5.00 to 6.00

The minimum wages of both hand and machine operators is fixed by the constitution and rules of the Glass Bottle Blowers' Association at \$20 per week in cash.^(c)

Bituminous coal mining is another industry in which the machine operators receive higher wages than hand workers. The United Mine Workers enforce a differential rate in the bituminous States for hand and machine mining. In 1900, in the State of Ohio, the rate for machine mining was two-thirds and in Indiana it was three-fourths of the rate for hand mining. Owing to the increased output of the machine-mined product those working with the machines can earn more than those working by the hand process, altho the former possess much less skill and training than the latter.^(d) The purpose of the United Mine Workers' Union is to keep the standard rate of earnings of the machine miners as high as possible, in order to mitigate the evil effects of the too rapid introduction of the machines. President John Mitchell, of the United Mine Workers, stated before the Industrial Commission:

We are opposed to the introduction of mining machinery for the reason that the men have to compete with the machine; * * * we must dig coal by hand as cheap as the machine will dig it, allowing for the cost of the machine.^(e)

The large economy of the machine method makes it possible to pay much higher wages with increased profit to capital and without reducing the price of the product. The Mine Workers' Union, by

^a National Glass Budget, June 9, 1900, p. 1.

^b Proceedings of the Twenty-seventh Annual Convention of the Glass Bottle Blowers' Association, pp. 49, 50.

^c Wage Scale and Working Rules adopted by the Glass Bottle Blowers' Association, etc., 1905-6, p. 82.

^d Report of the Industrial Commission, Vol. XV, p. 404.

^e Report of the Industrial Commission, Vol. XII, p. 55. To the Twelfth Convention of the United Mine Workers (1901) Mr. Mitchell said: "While we owe it to ourselves and to our craft to protect our trade against the encroachment of mining machinery, I do not wish to be regarded as one who would obstruct progress or favor retrogression; but I am unalterably opposed to a system which places a premium upon machinery, all the benefits of which are given to the mine owners."—Proceedings of the Twelfth Convention of the United Mine Workers of America, p. 46.

their insistence that the net earnings of the machine miner be higher than the hand miner, have thus prevented a reduction of the wages of the hand miners whose product must compete with the machine product.

METHODS OF PREVENTING DISPLACEMENT OF SKILL.

The entrance to the clearly defined trades of former days were defended by apprenticeship rules and regulations intended to safeguard the skill and maintain the wages of the workers. Since trades have begun to disintegrate and apprenticeship rules have become obsolescent, since the time of training has been shortened and the gates have been thrown down for floods of new workers, immigrants, and women and children, new methods have been devised by the workers to prevent the displacement of skill and to control the condition of entrance to the trades. The methods most frequently employed are:

(1) Opposition to machinery and new processes, or claim of jurisdiction over the machine operators.

(2) Prohibition of the grading of members of the craft.

(3) Prohibition of the use of journeymen's tools by laborers and helpers, or the debarment of helpers and handy men from certain lines of work.

(4) Rules against "lumping" or subcontracting and team work.

Each of these will be considered in turn.

OPPOSITION TO MACHINERY AND NEW PROCESSES.

Since the beginning of the modern era of machine industry workmen, whether organized or unorganized, have regarded with dislike every labor-saving device or mechanical improvement introduced in their own craft. In the early days they frequently assumed an attitude of open hostility, destroying the machines and driving away the operators. In more recent times, however, this policy has been abandoned, but labor organizations, while disclaiming hostility to machines or new processes, have endeavored in a number of instances to devise rules to retard their introduction and hinder their immediate use. A double motive underlies this policy. One concerns itself with the fear of displacement of the hand worker and the ultimate elimination of the craft, while the other arises from the effect of machinery in wholly or partially depriving certain handicraftsmen of their acquired skill. This motive is exemplified in the history of several of the leading American trade unions, notably those of the plumbers, the cigar makers, and the stonecutters.

PLUMBING.

Until a decade or so ago the "idle" time of the journeyman plumber (during which he was not engaged on outside jobs) was occupied in making lead traps and bends and other plumbing fixtures, which have since past to the foundry or workshop. At the present time only a few plumbers of the old school can make lead traps and their services are never required for the work. A man sitting at a modern machine can now turn out many scores of traps or other "fixings" in the time formerly required by the plumber to make two or three. Besides, the product of the machine is superior in many ways to the hand-made article. The work and skill required in connecting fixtures in buildings have also been materially lessened by more recent inventions. The slow skilful handling of lead has been superseded to a great extent by new and less expensive methods.

To protect the trade against a further loss of skill the rules of the plumbers contain a long list of plumbing goods, such as drum traps with outlets and screws attached, lead pipes with ferrules and nipples attached, etc., the use of which they endeavor to stop. The rules likewise contain a recommendation that all members advocate the use of iron sewer pipes in buildings, "believing that it will benefit the health of the community and create a demand for more skilled labor." It is also provided that all brass and nickel waste, flush, and supply pipe shall be prepared by the plumber who places it in position. "These rules to be enforced wherever practicable."^(a)

CIGAR MAKERS.

Prior to 1861 cigar, snuff, and tobacco products in all styles were manufactured, wholesaled, and frequently retailed on the same premises. The employees in the tobacco industry were all-round men and worked in all departments of the business, making cigars, snuff, and smoking tobacco. Moreover, there was an entire absence of the machinery used in modern manufacture, and consequently the business was conducted on a very small scale. In fact the employer often worked at the same bench with his employees. Often his helpers were fed and lodged by him, and in some cases were paid a portion of the product as wages.^(b)

The introduction of modern machinery led to a transition from this domestic system to a factory system of tobacco manufacture, causing at the same time a division of the industry into various branches, each branch producing a single class of goods. Cigars are now manufactured on a large scale by establishments located usually in large cities, equipped with modern and expensive machinery, employing

^a Report of the Industrial Commission; Vol. XVII, p. 160.

^b Tobacco, November 3, 1899, p. 1.

thousands of wage-earners and manufacturing millions of cigars annually. The prepared filler is placed in the hopper of a machine which apportions the quantity necessary for each cigar, places it in the mold spread to receive it by the operator of the machine, and shapes it. The wrapper is subsequently added by hand or machinery. There are also stripping machines for removing the midrib from the tobacco leaf, besides the "bunching" machines for preparing the tobacco for the wrapper.

Division of labor in the trade also plays an important part, which may be inferred in the following processes: "Booking" consists in straightening out and dampening the leaves; "stripping" is drawing out the large midrib of the leaf. Girls are usually employed at this work. "Bunch making" is the selection and shaping of the "filler" tobacco. This is usually done by hand on the 10-cent cigars and by the mold on the 5-cent cigars. "Rolling" consists in cutting the wrapper and then rolling it around the filler. This is done by hand or by the aid of the "suction table," the latter being a model plate with perforations for air suction, so as to hold the leaf in place. The plate also cuts the leaf to the exact shape desired for the wrapper. Either with or without the suction table the cigar must be rolled by hand, but the table permits less skilled workmen and girls to take the place of the skilled mechanics.

The "suction table" can not really be called a machine, since it is not a labor-saving device. It is simply a device for facilitating the work. It is not automatic, but assists the hand worker in measuring and cutting the cigar wrapper. Much of the skill of the hand worker consists in cutting the wrapper the correct size and rolling it smoothly over the "bunch." The "suction table" does the measuring by means of a die consisting of a perforated steel plate. The air suction holds the wrapper tightly over the die while a lever to which a roller is attached is moved by the operator over the die. This operation practically gives the wrapper its proper shape, and by raising the die by means of a foot lever the operator is enabled to separate the superfluous portion of the wrapper. The air suction keeps the wrapper taut over the die, enabling the operator to roll the "bunch" with less care than without the aid of the table.

The mold, which is a device for shaping the "filler," or "bunch," was introduced in 1869. It likewise simply facilitates hand labor and is not a machine. The effect of the introduction of the mold was the inauguration of the "team system" of manufacture. Previously it was customary for one cigar maker to shape the "filler" and also roll the wrapper, thus producing the complete cigar.

The Cigar Makers' International Union did not prohibit its members from working with the "molds" when they first came into use. Considerable opposition, however, developed in many localities on the

part of the cigar makers who rebelled against the use of the mold and the "team system" of manufacture. Tho not directly opposing the use of the molds the Cigar Makers' International Union at first insisted that the "bunch maker" as well as the "roller" should join its ranks, and granted the label only to the shops conforming to this rule.^(a)

This clause was found impracticable of enforcement and was soon repealed.

The attitude of the Cigar Makers' International Union toward the "suction table" has been one of opposition. In 1887, when the "suction table" was rapidly coming into general use, the president of the International Union recommended that manufacturers using the machine should not be allowed the union label. This rule has since been adopted, and still forms a part of the constitution of the Cigar Makers' International Union.^(b)

The opposition of hand cigar makers to both the mold and the suction table is due largely to the fact that the use of these devices for facilitating their work causes a loss of much of the skill acquired by them in learning the trade. The occupation of cigar making became so simple thereby that employers early inaugurated the practise of employing women and children in place of adult male cigar makers. The machine workers are not considered cigar makers by the union, and consequently are not admitted to membership. The following extract from a letter of Mr. G. W. Perkins, president of the Cigar Makers' International Union, dated May 6, 1903, and contained in the Eleventh Special Report of the Commissioner of Labor, states the attitude of the union toward the machines:

Replying to your query with reference to the attitude of the Cigar Makers' International Union toward machinery, let me say that, first, the International Union does not prohibit its members from working on machines. There are, however, no machines manufactured that will successfully make cigars. For that reason we do not allow the use of our labels on cigars made by machines. The reason for this is, that if our label means anything, it means good wages and good workmanship.^(c)

STONECUTTING.

The stonecutting interests in large cities have gradually introduced machinery for dressing cut stone for building purposes. The machine known as the "planer" was introduced in the eighties, but attention was not drawn to it by stonecutters until the early nineties. The stone "pick" came into use later, as did also pneumatic tools for carving. When first introduced stonecutting machinery was not

^a Constitution of the Cigar Makers' International Union, 1888, Art. II, section 9.

^b Constitution of the Cigar Makers' International Union, section 154.

^c Eleventh Special Report of the Commissioner of Labor, p. 572.

operated by journeymen stonecutters, but by such laborers as showed skill in operating machinery similar to the machines in planing mills, sash, door, and blind factories. As the use of the machines extended, and journeymen stonecutters began to be displaced thereby, the first impulse of the journeymen stonecutters was to oppose and endeavor to abolish their use.^(a) Where this was found impracticable they insisted that the planers be operated by journeymen stonecutters, who should receive the standard rate paid for hand labor. Thus, in 1896, in Chicago, the local journeymen stonecutters' union notified the contractors that all planers and lathes in stone yards on and after March 1 of that year must be operated by union stonecutters at the rate of 50 cents per hour at an eight-hour day.^(a) The strike that followed resulted in an agreement between the union and the contractors which provided that one-half of the persons employed in operating machinery should be stonecutters and the other half planer hands.

The stone pick is a heavy tool shaped like a pick for digging, and it takes the place of the point and hammer. It is used more in quarries than in stone yards. With it a workman can do two or three times as much work in a day as with a point and hammer. The Journeyman Stone Cutters' Association excluded the use of the pick by the following by-law, adopted in 1902, on the ground that its use required nothing but brute strength, and it afforded a means of supplanting skilled stonecutters with mere laborers:

This association will use every effort to discourage the use of what is known as a stone-pick, and in no case shall the pick be used on any stone that is to be shipped to any place where the pick is prohibited.^(b)

Pneumatic tools have been in general use in the stonecutting industry since the early nineties. They do better work, cut clearer lines, and make more accurate curved work than can be done with a mallet and chisel. The union has never objected to their use, since they do not do away with the skill of the journeyman stonecutter. As much care and accuracy are required in guiding the tool as were formerly required in working with a mallet and chisel.

The policy of the union in endeavoring to restrict the use of stonecutting machinery has not been very successful, owing to the fact that little skill is required to operate the machines, and it has not been usual for the stonecutting contractors to employ journeymen stonecutters as machine operators. The only requirements of the planer operator are a strong back and great physical endurance. At present, in most localities, where the planers are in use, they are operated by common laborers. The scope of the planer and other machinery in

^a Report of the Industrial Commission, Vol. VIII, pp. 355, 356.

^b Eleventh Special Report of the Commissioner of Labor, p. 344.

the stonecutting industry, however, is limited. The planer and the so-called circular saws can do only straight and circular cuts; hence, the stonecutting machinery does not entirely deprive the stonecutter of his art. Moreover, the cheapening of stonecutting thru the use of machinery has resulted in a larger use of stone for building purposes, and has consequently increased the demand for skilled stonecutters.

CLAIM OF JURISDICTION OVER MACHINE OPERATORS.

When opposition to machinery and new processes is found to be impracticable or otherwise undesirable, trade unions endeavor, as far as possible, to protect the old members against loss of skill or wholesale displacement: First, by assuming jurisdiction over men employed in the new process, and secondly, by insisting that they receive a relatively higher wage scale than the workers under the old process.

This policy has been pursued with varying degrees of success in the glass industry, printing trade, iron molding, and also in the soft-coal mining industry.

GLASS INDUSTRY.

Up to a decade ago the glass trade was considered as being free from the use of machinery or mechanical appliances. Following the introduction of the jar-making machines, machines for making tumblers and chimneys came into use. For a time the manufacture of narrow-neck bottles with necks less than 1 inch in diameter was considered beyond the possibility of machine manufacture. Within the last two years, however, machines have been introduced for the manufacture of beer and other narrow-necked bottles. In addition to the machine for making fruit jars and beer bottles already mentioned window-glass machines have been introduced within the last few years, but thus far little is known of them or of their practical value, as secrecy is maintained by the manufacturers in regard to their use. It is claimed, however, that no high-waged labor is required in attending them, as no blower or gatherer is needed. One ordinary workman at laborer's wages operates two machines.^(a)

When, in 1898, an automatic machine for blowing lamp chimneys was introduced much excitement was created in the trade, and to prevent demoralization of the industry a company was formed in 1899 to control the machine. It was claimed then that these machines were averaging about 2,000 chimneys per turn, at a labor cost of \$5, whereas the cost of about 250 chimneys per turn in the hand shop was about \$3.50.^(b)

The first impulse of the flint glass workers' union, when the chimney blowing machine was introduced, was to oppose it, their members

^a National Glass Budget, March 14, 1903.

^b Ibid, May, 27, 1899.

refusing to work the machine. The machine, however, was formally recognized by the general convention of Flint Glass Workers in 1899, but certain restrictions were placed upon its use. The number of hours that it could be worked were limited, and the union insisted that it be operated only by members of their organization. These rules have since been a source of trouble between the manufacturers and the union, and therefore have been modified from time to time.

The glass-bottle blowers, unlike the flint-glass workers, made no opposition when the fruit-jar machines were introduced, and, as previously mentioned, the portion of their membership working on this ware consented to work 45 per cent off the scale. They, however, also insisted that the operators be members of their own organization and that its members be given preference to run the machines when new men were put on.^(a) The union has not always succeeded in this demand, especially in case where very little skill is required in operating the machine. The organization at present, however, comprises a machine and press department, for which a special scale of wages is annually drawn up. Included in this branch are the machine operators on milk jars and wide-neck ware, such as vaseline, stove polish, octagonal, hexagonal, and square bottles. A three-years' apprenticeship is required for men in this branch, whereas five years are required for hand blowers. In 1903, 400 members, constituting about 5 per cent of the entire membership, were reported in the machine and press department of the Glass Bottle Blowers' Association.

The officers of the Glass Bottle Blowers' Association have repeatedly urged the members not to oppose the machines, and when given work upon them to bring out their best possibilities. The president's report to the convention of 1898 stated:

There is no denying the fact that the machine is now becoming a pronounced factor in our trade. It is our duty to do all in our power to provide some means or encourage every prospect that will lead to the employment of our members displaced by machinery.^(b)

To the twenty-fifth convention the president, Mr. Denis Hayes, repeated this warning, adding:

To my mind the most logical way to meet this question is not to antagonize machinery, but to endeavor to control it, so that we may not only have a voice in the fixing of the labor cost of its product, but in a measure regulate the hours of operation.

As a result of both the conciliatory policy of the unions and the increased productivity, as we have already shown, mechanical improvements in the glass industry have entailed neither a lowering

^a Proceedings of the Twenty-second Convention of the Glass Bottle Blowers' Association, 1898, p. 12.

^b Ibid., p. 13.

of wages nor a lessening of the number of men employed. The effect has been rather to relieve much of the physical strain of the labor, thus bringing into the industry a more intelligent and temperate class of men.^(a)

IRON MOLDING.

As in the glass industry, labor-saving machinery was not a serious factor of the foundry until within the last ten years. Of late, however, molding machines have undergone a wonderful development and are beginning to be seriously reckoned with by the hand molder. The first attempt to aid the hand work in molding was a device known as a stripping plate, by means of which the sand and rough surface of the pattern is stripped off. This device has been in use for more than two decades, but it can not be called a molding machine since it does not "draw" the pattern from the mold. Its uses have been multiplied, and it has been attached to the various types of molding machines later introduced.^(b) Next to the stripping plate, come the power rammers, a device for dispensing with the hard work of ramming up the molds, which in plain or ordinary castings is a serious item in limiting production. At present four kinds of rammers are in use—friction, steam, compressed air, and hydraulic. Both the rammer and the stripping plate are combined and are used on molding machines.

Molding machines which withdraw the pattern from the mold, and thus displace the most skilful work of the hand molder, are not ordinarily used in foundries where a general run of work is done. Neither are they profitably employed in job work where different patterns are necessary with almost every new casting turned out. They are, however, used extensively in repetitive work. In 1901 there were at least twenty-five styles of molding machines in use in the United States. Some are designed and made by the firms using them, and are not on the market. By the use of machines it is claimed that unskilled laborers perform the task equivalent to that of skilled hand molders, and do even better work at less cost. The newer types of machines tend to become automatic. A molding machine put on the market in 1904 is almost completely automatic in its operation, merely requiring an attendant, who lifts the flask off and sets it to one side, blows the sand from the table by means of an air hose, and all is ready for renewing the process.^(c)

^a Report of the Industrial Commission, Vol. VII, p. 901.

^b In speaking of labor-saving machinery in the foundry, reference is not made to the improved facilities in the shape of power cranes, cupolas, etc., but rather to machinery designed to displace the skill and labor of the mechanic. This form of machinery is commonly known as molding machines.

^c Foundry, November, 1904, p. 144.

In the stove-molding trade molding machines have not yet become an important factor, owing to the machine-like movement and rapidity of the hand stove molders. The power rammer, or "squeezer" is about the only machine known in the stove foundry, and this has been in use in one form or another during the last thirty years.^(a)

It is generally admitted by both the manufacturers and the molders that the machines tend to displace the skill of hand molders. Their use promotes likewise a division of labor even in cases where a skilled hand molder must operate the machine. The hard work not requiring a molder's skill is now profitably relegated to unskilled hands. Thus the work of shaking out the flasks and taking out the castings, of shoveling over and tempering the sand, is done by laborers and helpers. The devices for economizing work in foundries result in a definite task being provided for each molder, at which he soon becomes expert and which greatly increases his output. Moreover, it is claimed by many foundry employers that by far the best results can be obtained by molding machines when they are operated by ordinary laborers.

The attitude of the Iron Molders' Union toward the molding machine prior to 1899 was that of ignoring it. No organized effort was made to keep the machines out of the foundry, but union molders refused to operate them. The machines were accordingly put in charge of common laborers, or men trained to work them. In the general convention of the Iron Molders' Union in 1899 the president, Mr. Martin Fox, forcibly pointed out the danger of this "laissez-faire" policy, and urged that the organization adopt measures to control the machine worker. In his report to the convention he said:

The advent of the labor-saving machine in the foundry was the signal for an outburst of ridicule and contempt; they were relegated at first to the unskilled laborer. To-day that laborer has become a serious rival of the mechanic in many subdivisions of our trade. * * * I strongly advise that our members agree to work on these machines and bring out their best possibilities, providing satisfactory arrangements can be made as to wages. The mistake was made at the beginning when our members refused to work on them, but we should be guided by our experience, and without further delay adopt such a policy as will give to our members the control of the machine and retain to them the trade which they have spent the best years of their lives in acquiring.^(b)

A few years later Mr. Fox again urged the union to take active measures for controlling the machine operators. He said:

The demand for skilled molders will not always be as great as it is to-day, and we can well conceive the time when the molder who would now refuse to take a job as a machine operator will be glad of

^a Iron Molders' Journal, Vol. 39, p. 105.

^b Proceedings of the Twenty-first Convention of the Iron Molders' Union, 1899, p. 11.

the opportunity. * * * It is manifestly to our interest to protect the machine operator in his wages and to assist him in securing a wage commensurate with his output and skill.^(a)

Mr. Fox pointed out to the convention that it is no longer the simplest kind of work that is made upon the molding machine. "Every year has seen an extension of its sphere, and a very high grade and difficult class of work is being successfully made with the use of the machine. As the work made on the molding machine improves in quality," he said, "it follows that a high degree of skill is required of the operator. Thus, in some instances, foundry men have found it more profitable to employ journeymen molders as machine operators upon the better class of work." Mr. Fox stated, however, that on the common run of work unskilled operators can easily become efficient specialized molders.

Altho no special provision was made for the admission of machine operators into the Iron Molders' Union by the convention of 1899, the executive board, in September, 1901, granted a charter to a local organization of machine molders. The following year the constitution of the organization was amended so that machine operators could be admitted.^(b)

The point of friction between the employers and the unions over the question of admitting machine operators is a question of wages, the iron molders adhering to the policy of maintaining a high standard of earnings among the machine operators in order to protect the hand molders.^(c) Regarding the necessity of this policy the Iron Molders' Journal, January, 1903, contains the following editorial comment:

We can well look forward to the time when there will not be the same demand for skilled molders that there is to-day, and, feeling as we do, that there is a class of molders who would make excellent machine operators, we are anxious to reserve for them, if possible, the opportunity to operate any machine.^(d)

Despite the endeavor of the Iron Molders' Union to control the machines, comparatively few molders are to-day operating molding machines. It is claimed by some employers that molders who work the machine do not always show a willingness to do justice to the

^a Iron Molders' Journal, Vol. 38, p. 617.

^b The present qualifications for membership in the union read as follows: "Any molder serving an apprenticeship of four years at the trade in any of its branches or subdivisions or who has worked at the trade in any of its branches or subdivisions and is competent to command the general average of wages paid in the branch or subdivision with which he is identified, may be admitted as a member." This clause formerly read: "Any molder serving an apprenticeship of four years at the trade, or who has worked at the trade four years, and is competent to command a general average of wages, may be admitted," etc. See Constitution and Rules of the Iron Molders' Union, 1902, Art. VIII, section 1, and 1899, Art. VIII, section 1.

^c Report of the Industrial Commission, Vol. XIV, p. 150.

^d Iron Molders' Journal, Vol. 39, p. 14.

possibilities of the machine, or conscientiously assist in its development. The aversion of skilled hand molders to the operating of machines seems to be due to two principal causes: (1) The machines demand considerable physical exertion on the part of the molder, and (2) the work of operating the machine differs widely from that of hand molding. Moreover, owing to the lower piece-rate wages paid the machine operators it is impossible for them in some cases to earn the minimum rate of wages demanded by the union. Consequently the machines in a great number of foundries are now run by unskilled immigrant laborers.^(a)

PRINTING.

The printers have solved the problem of assuming jurisdiction over machine operators much more successfully than the iron molders. Previous to 1890 typesetting was essentially the same art as it was in the sixteenth century, tho other branches of the printing trade had become revolutionized by improved labor-saving machines. "Probably no other handicraft employing such a large number of persons [as that of type composition] underwent as little change during this period." During the last two decades, however, machine composition has been rapidly supplanting typesetting by hand. "The machine is still constantly encroaching on the field of the hand compositor, but the period of introduction may be properly considered as concluded with the year 1900. By that time, the craft had adjusted itself to the new conditions and the future trend of events could be foreseen with some clearness."^(b)

When the linotype was first introduced hand compositors were greatly alarmed over the possibility of the machines being operated with unskilled labor, but the technical character of the machine soon made it evident that the skilled hand compositor was required for its operation. "Every part of the hand compositor's knowledge is useful to the machine operator, except an acquaintance with the location of the case boxes, and instead the operator must learn the keyboard of the machine. In addition, the operator must think far more quickly. He must not only know the same things, but he must be able to use knowledge more rapidly."^(c)

Regarding the qualifications of a linotype operator Ex-President Donnelly, of the International Typographical Union, testified before the Industrial Commission as follows:

Q. Is the untrained man, not a practical printer, as capable of running a Mergenthaler linotype machine as a practical printer?—A. No; an untrained man who has not learned the printing trade is not

^a Eleventh Special Report of the Commissioner of Labor, pp. 167, 168.

^b Barnett, The Introduction of the Linotype, Yale Review, Vol. XIII, p. 251.

^c Ibid., p. 273.

as capable of operating a machine, and does not make a competent printer or operator.

Q. Suppose he had been trained as a typewriter, would he be on a parity with the practical printers in running the machine?—A. Not at all. The typewriters to-day who could be considered competent to operate a machine, or ought in a short time to become competent to operate a printing machine, are men who receive higher wages as typewriters and stenographers than they would receive at the printing trade.^(a)

Undoubtedly the foremost cause tending to maintain a high grade of efficiency and skill among linotype operators is the higher speed which they must acquire. The machines are used mainly in offices where rapid composition is deemed the most important qualification of the compositor. The machine operator in following the copy must retain in his mind a considerable number of words in order to save time. It is estimated that a machine compositor who holds in his mind 2,000 words per hour must give closer mental application to his work than does the hand compositor.^(b) The higher speed attained on machines makes the work more exhausting than hand composition, and thus both mental retention and physical endurance are required of the operator. The International Typographical Union has at times approached the problem of seeking to keep the speed attained on machines within what it considers reasonable limits. On several occasions the conventions of the International Union sought to impose a maximum limit of output, but this policy failed in its application. In England, however, the practise prevails of limiting the output of operators on the linotype.^(c)

The International Typographical Union took no measures to oppose the machines when introduced. The union, however, immediately claimed jurisdiction over the operators.^(d) At the thirty-sixth annual session a resolution was adopted that "The International Typographical Union favors the recognition of such (typesetting) machines," and "recommends that subordinate unions * * * take speedy action looking to their recognition and regulation, endeavoring everywhere to secure their operation by union men upon a scale of wages which shall secure compensation equal to that paid hand compositors."^(e) At this time (1888) there were fewer than 100

^a Report of the Industrial Commission, Vol. VII, p. 276.

^b Eleventh Special Report of the Commissioner of Labor, p. 75.

^c The Printing Trades and the Crisis in British Industry, in the Economic Journal, Vol. XII, pp. 1-12; also Barnett, The Introduction of the Linotype, Yale Review, Vol. XIII, p. 268, and Eleventh Special Report of the Commissioner of Labor, pp. 53-56.

^d "Occasionally a small union refused for a time to make a scale for machines, but the International Union steadily discountenanced such a policy."—Barnett, The Introduction of the Linotype, Yale Review, Vol. XIII, p. 262.

^e Convention Proceedings, 1888, p. 181.

machines in operation in the United States and Canada, and the greater part of these were being run experimentally.^(a)

The success of the typographical union in carrying out this policy is undoubtedly due largely to the fact that the character of the work on the machine was such as required trained hand compositors. A knowledge of the construction of the machine, while useful, is not essential to the operator. Where machines are used in sufficient numbers, machinists known as machine tenders are usually employed to do the repairing and adjusting.

The most pronounced economic advantage accruing to the printers from the introduction of the machine has been the material reduction secured in the length of the working day. The work of the machine operators being much more exhausting and constant than that of the hand compositors, the union insisted that the former be granted a workday not exceeding eight hours. In newspapers offices, where the machines are principally in use, the workday in many cases is considerably less, not exceeding six hours.^(b)

PROHIBITION OF THE GRADING OF JOURNEYMEN.

The disintegration of a trade, caused either by machinery or a greater division of labor, as we have already shown, frequently leads to gradations of skill and efficiency among the workmen engaged therein, thus enabling a less efficient and lower-paid group of mechanics to constantly encroach upon the work of the higher grade. The lower grades of mechanics within the craft are consequently a serious detriment to the highly skilled classes. The employer, wherever it is profitable and possible to introduce a less skilled workman at a lower wage, will take this course regardless of the effect it will have upon the higher grade of workmen in the same craft. Hence, journeymen and workmen possessing the qualifications and training which enable them to perform the most difficult processes in a craft seek to protect themselves from the encroachment of the less skilled, either by requiring a high standard of efficiency of all who seek entrance to their trade or by prohibiting the grading of members of the trade. The methods of accomplishing this are (1) the enforcement of a minimum wage below which no journeyman is permitted to work; (2) the prohibition of the payment of differential wage rates.

The antagonism against the grading of journeymen is well illustrated in the history of the International Association of Machinists. The disintegration that has affected the trade of the machinist within

^a In 1904, according to the returns of the unions, 92.75 per cent of all machine employees were members of the International Typographical Union.

^b In 1904 there were 5,491 machines in use in newspaper offices and 1,638 in book and job offices. Barnett, *Introduction of the Linotype*, Yale Review, Vol. XIII, p. 264.

the last two decades has introduced, as we have already shown, a large number of relatively unskilled workmen, namely, the specialists and the handy men. The machinists endeavored to prevent these lower grades of mechanics from encroaching upon their work by enforcing a uniform wage scale in each locality. Their minimum wage, tho specially designed for the weaker and less skilled machinists, also affords protection to the more highly paid men, since employers, when they are forced to pay to less skilled mechanics as high a wage as is paid to those who possess higher qualifications, naturally choose the latter. It is the most highly skilled machinists who enforce a high minimum rate. In 1893 a strike was caused in Paducah by the proposed grading of machinists in a railway shop from \$2.50 to \$2.75 per day. The men objected to a superintendent having the power to say who should get \$2.50 and who should get \$2.75.^(a)

Again, in 1895 the Machinists' Journal uttered an editorial protest against the practise in the machine shops of the navy-yard of grading machinists and paying a different rate of wages to each grade. This protest was continued until the year 1900, when the convention of the American Federation of Labor "past a resolution instructing their council to try to change the Navy Department rules, so that machinists might be employed only under one class, which should receive the standard rate of wages."^(b)

Despite the efforts of the international association to prevent the grading of machinists, the rise of the specialists and the increasing subdivision of machinists' work are constantly making possible, and perhaps necessary, the division of mechanics into different grades and classes, with a different scale of wages for each class. "This was tacitly recognized by the International Association of Machinists, when in 1903 it changed its constitution so as to permit the admission into its ranks of specialists and others working in the machine shop who could not be described as machinists. Prior to 1903 the constitution admitted 'any workman performing the work of a machinist * * * provided he receives the minimum rate of wages paid in his locality;' but since 1903 this section has been so amended as to admit 'any person working in a machine shop and engaged in any manner with the making and repairing of machinery * * * provided he receives the minimum rate of wages of his class in his locality.'"^(c) It is thus by the enforcement of a minimum rate of wages for each grade of workmen that the machinists endeavor to control the conditions of entrance to their trade.

^a Machinists' Monthly Journal, Vol. V, p. 262. Also Studies in American Trade Unionism, edited by Hollander and Barnett, pp. 116-118.

^b Studies in American Trade Unionism, edited by Hollander and Barnett, p. 117. See also Report of the Industrial Commission, Vol. XVII, pp. 221, 222.

^c Studies in American Trade Unionism, edited by Hollander and Barnett, pp. 117, 118.

The Journeymen Stone Cutters' Association likewise for many years has discountenanced the grading of its members by employers. According to the by-laws of the association "any man shall be considered a practical stonecutter who can complete stonework true and perfect. This will include all kinds of stonework—plain and molded or carved. All stonework on which a mallet, mash hammer, and chisel are used, shoddy work and pitch-faced ashlar included, shall be considered as practical stonecutting, and shall be performed according to the rules and regulations of the branch under which it is done, provided it does not conflict with the constitution and by-laws of the general union."^(a)

Despite the dislike of the National Association of Stone Cutters to the grading of journeymen and the payment of a different rate of wage to each grade, this practise exists in several localities. "Where the grading system prevails there are usually three grades. All of the grades are composed of journeymen, the least experienced belonging to the third grade. Men in the second grade are expected to do more and better work than men in the third grade, and they get higher wages. Men in the first grade are expected to do more and better work than men in the second grade, and they get the highest wages. The grades are fixed by the union on application of the men. * * * Apprentices of unusual skill, after serving the four years of apprenticeship, not infrequently get second-grade cards."^(b)

In the foundry two classes of iron molders have always been distinguished, one known as bench molders on small castings, such as make up the different parts of a stove, and the other, known as floor molders, who work on large castings, as engine cylinders, machinery, etc. Small castings require less care and time for molding, tho stove molders and others working on small castings become very proficient, and work with great rapidity. In the molding of large castings skilled molders generally must be employed, but the greater part of the work of preparing the mold is done by helpers and handy men.^(c)

Tho different wage scales for floor molders and bench molders have generally prevailed in the industry, the policy of the Iron Molders' Union has been to equalize their earnings as far as possible.^(d) Bench molders, as a general rule, receive slightly more per day than floor molders, the wage scale for the former being \$3.25, whereas floor molders receive \$3 per day in foundries where the time-work system prevails.^(e)

^a Eleventh Special Report of the Commissioner of Labor, p. 342.

^b Ibid., p. 343.

^c Thus the molding of an engine cylinder often requires as many as seven molders and an equal number of helpers, and takes a week for the completion of the process.

^d Studies in American Trade Unionism, edited by Hollander and Barnett, p. 240.

^e Piecework system of wage payment is almost universal in the stove-molding branch of the industry.—Eleventh Special Report of the Commissioner of Labor, p. 150.

Ex-President Fox, of the Iron Molders' Union, in his report to the general convention of 1902, cautioned the delegates against insisting upon a uniform minimum rate for all grades of work. "In establishing minimum rates, especially when they approach the higher ranges, we should be careful to use wise discrimination when there is a class of work of very inferior grade included, and upon which molders are employed who are adapted for that class of work only. Circumstances over which we have no control are creating a class of molders capable of distinct classification from that of the all-round mechanic or jobbing molder."^(a)

PROHIBITION OF THE USE OF JOURNEYMEN'S TOOLS BY LABORERS AND HELPERS.

Rules and regulations prohibiting helpers and laborers from using journeymen's tools aim to prevent the "illegitimate man," who has not undergone the training or complied with the apprenticeship regulations required by the union, from surreptitiously entering the craft. They are enforced by most of the building trades, especially those in which a high standard of skill and efficiency is maintained. The sheet-metal workers, for example, do not permit laborers or helpers to use the journeyman's tools, or to assist any journeyman in doing mechanical work, excepting that of holding the "dolly."^(b) A similar rule is enforced by the bricklayers, stonecutters, and by some of the local organizations of plumbers and steam fitters.

The Bricklayers and Masons' International Union in particular for many years has enforced rules to maintain the skill of the craft. One of these rules forbids mortar to be spread on a wall with any other instrument than a trowel, or by any other workman than a bricklayer. Altho these rules result in restricting the output, they are not enforced wholly for this purpose. There is a strong feeling among the bricklayers that using a trowel is the act of a skilled artizan, and that the use of a shovel in the place thereof by a laborer or unskilled mechanic is a distinct reduction of the dignity of the craft. The New York agreement of 1900 of the local Bricklayers and Masons' International Union and the employers' association contained the following clause:

That no laborers be allowed upon any wall or pier to temper or spread mortar, which shall be delivered in bulk, said mortar to be

^a Iron Molders' Journal, Vol. 38, p. 610. In his testimony before the Industrial Commission, Ex-President Fox made the statement that the introduction of machinery is practically going to "eliminate the highly skilled molder in a short time" from the agricultural and malleable iron work branches of the trade.—Report of the Industrial Commission, Vol. XIV, p. 148.

^b Agreement of the Amalgamated Sheet Metal Workers' Protective and Benevolent Association of New York, and the Employers' Association of Roofers and Sheet Metal Workers of Greater New York and Adjacent Cities.—Report of the Industrial Commission, Vol. XVII, p. 394.

spread with a trowel by the bricklayers, who shall work by the hour only. Nor shall any member of the bricklayers' unions work for anyone not complying with all the rules and regulations herein agreed to.^(a)

Similar in effect to the above clause is the following, contained in the agreement between the Painters' District Council and the Contracting Painters of Chicago and Vicinity, March 1, 1904, to March 1, 1906:

SECTION 7. Said party of the first part agrees that they will not sublet to any of their employees or others, by contract or otherwise, any wall washing, painting, glazing, paper cleaning, or any character of hard-wood finishing, either on contracts or in factories, and under no circumstances shall they employ laborers or nonunion men to do any class of preparatory work in any branch.^(b)

Regarding similar rules of building trades in Great Britain, Charles Booth writes as follows:

Differentiation of the laborer's and the artizan's work is sharply defined. There are rigid rules in several of the trades emphasizing this. The use of the tools, for instance, of the skilled man by the laborer is frequently forbidden. In the provinces and in much of the suburban work in London this division is, however, less absolutely maintained, and it is here that the laborer is trained to become a handy man or is gradually qualified to claim work probably in another locality as a fully trained artizan.^(c)

The limitation of the number of helpers and handy men arises from the same motive as the prohibition of the use of the journeyman's tools. Since the helper receives a lower wage than the journeyman the employer usually wishes to have more helpers and fewer journeymen. The unions, on the other hand, in order to give as much employment to their own members as possible and to prevent too many helpers from gaining admission to the craft, in a number of cases fix the number of helpers a journeyman may have. Thus for many years the United Association of Journeymen Plumbers, etc., has complained that the employment of helpers results not only in an oversupply of plumbers, but in a decline of the standard of workmanship in their craft. Accordingly, in 1896, a movement was inaugurated, which was favored by a number of employers, to abolish the "helper." Separate locals have taken up the question and a number have succeeded altogether in eliminating the helper from the craft.^(d) Where it has been found impracticable to abolish the "helper" strict rules are enforced limiting the number that may

^a Report of the Industrial Commission, Vol. XVII, p. 380.

^b Bulletin of the Bureau of Labor, No. 55, pp. 1623, 1624.

^c Life and Labor of the People of London, Vol. V, p. 61.

^d The Lynn agreement of 1904 between contracting plumbers and the local plumbers' organization, contained a provision that no plumber should be allowed to work with helpers.—Bulletin of the Massachusetts Bureau of Statistics of Labor, No. 33, p. 255.

work with journeymen. The following clause in the Dubuque Steam Fitters' agreement, 1903, is typical of the provision relating to the restriction of helpers usually inserted in agreements of journeymen and employers in the plumbing and steam fitting trades:

The journeyman steam fitter may use a helper who has worked at the trade any length of time, but he can not use more than one helper or pipe hander. Helpers shall do no jobbing or other work except under the supervision of a journeyman steam fitter. Any previous offense shall bar him from being further employed in any union shop.^(a)

The electrical workers follow a similar policy, usually restricting the number of helpers to one for each journeyman employed.^(b)

In iron molding the question of the "helper" or handy man is not so serious as in the building trades. It is generally admitted that a force of helpers and laborers is required in the foundry, since much unskilled work is done in connection with molding. The work of shaking out the flasks, taking out the castings, and shoveling over and tempering the sand is done by laborers and helpers. The ratio of laborers to molders depends largely on the class of work, large castings requiring a larger number of helpers than small castings. In very small castings the aid of helpers is not always essential. The tendency in foundries is more and more to restrict molders to skilled work, while the ordinary work and minor processes, such as are enumerated above, not requiring the molder's skill, are relegated to unskilled hands. While the Iron Molders' Union is not directly opposed to this tendency of the greater division of labor, it seeks, nevertheless, to discourage the practise as far as practicable, on the ground that the helper tends to displace the apprentice. Thus, an editorial in the Iron Molders' Journal states that the unlimited employment of helpers and handy men "would create a class of men whose knowledge of the trade would be of a most limited nature, and who would become practically one-job men, and who, because of their mechanical inferiority, would be unfit for membership in our organization."^(c)

The question of employing unskilled laborers in the foundry was brought up for discussion at a conference of the Iron Molders' Union with the Stove Founders' National Defense Association in 1902, and the following clause adopted:

The general trend of industrial development is towards employing skilled labor, as far as practicable, at skilled work, and in conform-

^a Quoted in *Studies in American Trade Unionism*, edited by Hollander and Barnett, p. 303.

^b Agreement between the Electrical Contractors of Boston and Vicinity and Local No. 103 of the International Brotherhood of Electrical Workers of America.—Bulletin of the Massachusetts Bureau of Labor No. 34, p. 367.

^c Iron Molders' Journal, Vol. 40, p. 504.

ance with this tendency every effort should be made by the members of the Stove Founders' National Defense Association and the Iron Molders' Union of North America to enable the molder to give seven hours of service per day at molding, and to encourage the use of unskilled help to perform such work as sand cutting and work of like character, when the molder can be given a full day's work.^(a)

The effects of specialization and the varying degree of skill among molders of the present time is beginning to be felt by union iron molders. "It requires no demonstration," wrote the editor of the Iron Molders' Journal, "to convince us that the foundry industry in many of its features is being revolutionized. Specialization has already induced us to modify the policy of the Iron Molders' Union in important directions."^(b)

RULES AGAINST "LUMPING" OR SUBCONTRACTING AND TEAM WORK.

The opposition to subcontracting and team work arises from the fact that this method of employment leads to division of labor and a lowering of skill by inducing journeymen to employ as many helpers as possible. The interest of the journeyman when he works under contract is to turn out as great a product in as short a time and with the least cost to himself, regardless of the quality of his workmanship. He accordingly employs laborers and helpers to do the less skilled parts of the work. This increases the number of helpers in the trade, and consequently tends to increase the supply of journeymen and lower the standard of efficiency. As we have already seen, a helper is ever alert to take up the work of the journeyman with whom he works, and in this way gain admission to the trade.

A number of American labor organizations, during some period of their history, have been compelled to face the question of "lumping" or subcontracting and team work. The methods of dealing with the problem may be illustrated by reference to a few selected organizations.

An early instance of open opposition of an American trade union to the system of subcontracting and team work is found in the glass industry. In the first convention of glass-bottle blowers, held in Philadelphia in 1856, the principal question before the body was the unpopularity of the new method of work then being introduced, namely, the system of having each blower hire his own helper to assist him. This practise was considered an infringement upon the apprenticeship system. The convention accordingly past a law prohibiting blowers from employing helpers or anyone working for less than the standard rate of wages. Two years later (1858) another

^a Bulletin of the Bureau of Labor, No. 62, p. 193.

^b Iron Molders' Journal, Vol. 39, p. 250.

convention past the following resolution against the contract system:

That we will not work in any factory with anyone who has a molder or finisher or an assistant in making bottles or vials or for other purposes than gathering glass, except such assistant be a regular journeyman or apprentice to the business.^(a)

This regulation has prevailed in union glass-bottle factories throughout the United States ever since.

Similar opposition against the practise of journeymen hiring their own helpers developed early in the history of the Iron Molders' Union, when a number of strikes were inaugurated with the object of abolishing what was known as the "berkshire system." The principal feature of this system was that each journeyman molder had a helper or "buck" whom he paid from his earnings and who, after several years' experience, might enter the trade as a molder with a hired "buck" of his own. This practically amounted to a "contract system" of employment, and was regarded by the union as an encroachment upon the apprenticeship system. The Iron Molders' Union, after several years of opposition and conflict, succeeded in abolishing the "berkshire system" in union foundries throughout the country. In 1897, Ex-President Martin Fox, of the Iron Molders' Union, stated before the National Stove Founders' Association that the "berkshire system" had ceased in the United States, except in a few foundries. Mr. Hogan, the secretary of the stove founders' organization, made a similar statement in his testimony before the Industrial Commission, adding that in his opinion the employment of "berkshires" was injurious both to the molders and to the manufacturers, since it is best for both that every molder should be thoroly instructed in his business, an end accomplished only thru apprenticeship.^(b)

Hostility to "teamwork," or the practise of several persons working jointly upon the same product, each performing a separate operation, is of much the same character as the opposition to the practise of mechanics employing their own helpers and laborers. Both systems of employment have the same tendency to increase the subdivision of labor and thus lower the standard of skill and cause an oversupply of journeymen in the craft. For these reasons the members of the Journeymen Tailors' Union, despite the urging of their officers, have stedfastly refused to assume jurisdiction over the "special order" tailors who do custom work but who are employed in teams, each tailor making only part of a garment.^(c)

The opposition of the cigar makers to the system of teamwork

^a The Commoner and Glass Worker, October 18, 1902, p. 9.

^b Report of Industrial Commission, Vol. VII, p. 865.

^c See ante, pp. 704, 705.

known as "bunch and filler breaking," which came into vogue with the introduction of the mold, is likewise due to the fact that it lowers the standard of skill in the trade. With the use of the mold "bunch making" became a separate branch of the trade, requiring so little skill that it became an easy matter for employers to introduce cheap labor into the cigar-making industry.^(a) The molds which are devised for shaping the "filler" or "bunch" are made of wood, in two pieces, each pair of molds being carved out to admit 10 or 20 bunches. The "bunches" when placed in the molds are compressed in order to get the desired form. The bunch maker accordingly does not take so much pains to shape them in his hands as he would if the molds were not used, since the mold gives a uniform shape to the bunches without much preliminary manipulation. Even if he puts in too much or too little filler tobacco, the outside appearance is about the same, tho not infrequently the filler tobacco is so pressed together as to form hard places in the "bunches," and consequently the cigars will not draw or smoke well.

The Cigar Makers' International Union, as we have already shown, never prohibited its members from working under the "team system." Many of the members, however, rebelled against it and refused to work with "bunch makers." The International Union at first insisted that the "bunch makers" as well as the "rollers" should become members of the union.^(b) But owing to the fact that the "bunch makers" were mostly women and boys this rule was found impracticable of enforcement, and consequently was repealed. At present the team system prevails in practically all cigar factories where the cheaper grades of goods are produced.

A notable instance of nonopposition to the system of subcontracting or hiring of helpers by journeymen is found in the pottery industry, where this system of employment almost universally prevails. The journeymen "jiggermen," dish makers, and pressers pay their helpers from their earnings, being at once employees and employers. Each employs his own "batter out" (the boy who cuts off and prepares the clay), his mold runner, and his finisher.^(c) The pottery employees do not seriously object to the contract system, tho in July, 1902, the Brotherhood of Operative Potters made the proposition to the Western Manufacturers' Association that all contract labor in all branches of the trade should be abolished.^(d) The principal reason for the nonopposition in the pottery trade seems to be that an oversupply of skilled workmen is not caused thereby. The number of helpers

^a Cigar Makers' Journal, February 10, 1878.

^b See Constitution of the Cigar Makers' International Union, adopted 1887, Art. IV, sec. 1.

^c Eleventh Special Report of the Commissioner of Labor, pp. 667, 668.

^d Ibid., p. 679.

employed by each journeyman is limited. To employ more than the average number would not be profitable, since in this way a larger product can not be turned out.^(a) Furthermore, not all helpers are capable of becoming journeymen, and consequently there is a constant "weeding out" of the incompetent and inefficient.

MODERN APPRENTICESHIP.

The various measures taken by workmen for the defense of their skill, such as have been enumerated above, tend to enable them either directly or indirectly to exercise some control over the conditions of entrance to their trades. It is a generally recognized principle of trade unions that without such control the maintenance of high standards of skill and large earning capacity is impossible. Pride in good workmanship characterizes the skilled journeyman, and differentiates him from the unskilled. "Every true mechanic takes deep interest in the general standard of workmanship for the entire craft, as well as pride in his own individual work. His feeling toward the incompetent workman is one of disapproval, to the extent of seeking to exclude him from the organization, unless prevented by other union policies."^(b) The rigid enforcement of apprenticeship laws when possible, the supervision of promotion within the craft, and the entrance examinations conducted either by the unions, by employers, or by both jointly, are therefore defended and upheld on the ground that higher standards of workmanship result therefrom.

The control of entrance to the trades is, however, becoming increasingly difficult. The extensive use of machinery in almost all trades and handicrafts, the minute subdivision of labor, and the consequent specialization of occupations, as has already been pointed out, have been gradually displacing the old forms of skill and workmanship, thus rendering necessary changes in the methods pursued by workmen in acquiring craft knowledge and in equipping themselves for industrial careers. The old system of apprenticeship, which at the beginning of the nineteenth century was the almost universal method of entering a trade or handicraft, is rapidly becoming unsuitable to modern industrial conditions, and the type of apprentice who spends the whole term of his apprenticeship in one employ, not only mastering one branch of a trade but the whole trade, has largely ceased to be. Few men now have the desire or the opportunity to teach an apprentice his trade, and even if this were not the case trades and occupations are subdivided into so many different branches, and so deputed to various machines, that it is sufficient for an apprentice to be put to one small division or form of work, and to remain there until he is

^a In some cases one helper serves two journeymen, who combine in employing him.

^b Studies in American Trade Unionism, edited by Hollander and Barnett, p. 267.

entered as a full-fledged mechanic, "stunted in all future stages of his growth by an unsuitable environment, a restricted outlook, and his too early planting out."^(a)

To fully comprehend the modern decadence of apprenticeship, a knowledge of the old system that prevailed previous to the nineteenth century is essential. At the time Adam Smith wrote the "Wealth of Nations" apprentices almost without exception were obliged to serve seven years. This period was regulated and enforced by law. In olden times the enforcement was under the supervision of the guilds, and the wares of the artizan could not be sold unless he had been regularly apprenticed.^(b) The apprentice generally began his training in his early boyhood and was indentured to a single employer during the whole period of apprenticeship. It was the custom to take an apprentice into the employer's family, with whom he lived in very close relations. In return for the training and sustenance he received, the whole labor of the apprentice belonged to his master. In some cases money, too, was given to the employer for teaching the boy his trade, and, if he could not give money, he gave time, or became bound for more than the usual number of years.^(c)

There is little doubt that the old apprenticeship system was largely a matter of exploitation on the part of the employer.^(d) The long term is explicable not only from the fact that trades were less subdivided and disintegrated and consequently more difficult to acquire than at present, but also because boys were indentured at a very early age, generally between 12 and 16 years.

A description of the old indenture system prevailing in the small industries (*petites industries*) of France, by a French writer, M. Olphe Gaillard, sheds some light upon the conditions under which the apprentice of former days worked. "It is not rare," writes M. Gaillard, "to meet with some small shops where apprentices work from thirteen to fourteen hours per day, with a Sunday half holiday, and are lodged in damp, ill-ventilated hovels or in cold barns, exposed to the weather."^(e) Added to the wretched physical environment was the

^a S. G. Rawson, *The Nation, the Apprentice, and the Polytechnic*, Contemporary Review, Vol. LXXX, p. 585.

^b Bolles, *Apprenticeship and Industrial Schools in Pennsylvania*, Annual Report of the Pennsylvania Bureau of Statistics, 1893, p. 3.

^c Adam Smith, *The Wealth of Nations* (Rogers edition), Vol. I (Book I, Chap. X), p. 107.

^d The keen discernment of Adam Smith pointed out that a seven years' term was excessive, and that the "longest apprenticeships can give no security against fraud." "In the common mechanic trades," he writes, "those (i. e., lessons) of a few days might certainly be sufficient. The dexterity of hand, indeed, even in common trades, can not be acquired without much practise and experience."—*Wealth of Nations*, Book I, Chap. X.

^e *La crise de l'apprentissage et les conditions du travail des jeunes ouvriers dans l'industrie moderne*. La Science Sociale, Vol. 34, p. 193.

lack of opportunity for mental culture. The apprentice of the old days did not come in constant contact with fellow-workmen in the same craft, and his long hours of fatiguing manual work did not permit intellectual recreations. Furthermore, as M. Olphe Gaillard points out, the small isolated shops in which apprentices worked were not so amenable to inspection or legislation as modern factories.^(a)

The gradual decadence of this ancient method of teaching boys the knowledge of a craft may be ascribed to various causes, all of which have their roots in the economic changes wrought by machine industry. In general they may be summed up as follows:

- (1) Production on a large scale, which destroys the personal relations between employer and employee or master and apprentice.
- (2) The extensive use of machinery and subdivision of labor.
- (3) The unwillingness of employers to take on apprentices.
- (4) The unwillingness of journeymen to instruct apprentices.
- (5) The dislike of boys for apprenticeship.

Each of these, in so far as they have affected changes in the methods of entrance to a trade, will be taken up in turn and discusst separately.

LARGE SCALE PRODUCTION OF MODERN INDUSTRY.

In olden times, as has already been remarked, the apprentice (who frequently entered the household of his master) was under the direct supervision and responsibility of the latter for his training and his moral conduct. Such close personal relations between apprentice and master, under the modern system of production on a large scale, is utterly impracticable, if not impossible. The employer is no longer responsible for the training and conduct of the apprentice, even in cases where the apprentice is duly indentured. Instead of the master directly supervising the training of the apprentice, this duty in modern workshops is relegated either to the foreman or to the journeymen, or it is entirely neglected. The speed and stress under which modern industry proceeds frequently renders the training of an "all-round" apprentice a financial loss to the employer, who can not permit his journeymen to be diverted from their labor in order to look after the apprentice's instruction. Consequently the apprentice, instead of being trained to do journeymen's work, is not uncommonly given odd jobs around the shop, acting as errand boy and handy man.^(b)

^a La crise de l'apprentissage et les conditions du travail des jeunes ouvriers dans l'industrie moderne. La Science Sociale, Vol. 34, p. 192.

^b This practise has proceeded so far that a comparatively new group of mechanics, the electrical workers, define an apprentice as one "who is employed to do errands, carry material to or on job, attend lockers, and assist journeymen in testing," but who may not be employed for any other purpose. See agreement drawn up by the New York Electrical Workers and employers (1900), in Report of the Industrial Commission, Vol. XVII, p. 415.

Even if the old form of apprenticeship were retained under modern conditions, and the employer were still held personally responsible for the training of the apprentice, in the great majority of trades and occupations the practical usefulness of such a system would be almost nil. In industries in which automatic or semiautomatic machines and a minute subdivision of processes have come into play, small opportunity is afforded a boy to acquire a thoro knowledge of all branches of a craft. Moreover, a mechanic under modern conditions finds it more profitable to confine himself to only one narrow branch of a trade, for he gains thereby as great a pecuniary advantage to himself as if time and effort were expended in the acquisition of the whole trade. Only a very few employees in the manufacturing industries possess a broad knowledge of the different branches and processes of a whole craft, and these are generally the class of men who direct the labor of others—the foremen and superintendents. But for the great bulk of the workmen, who perform the mechanical operations, little knowledge beyond the particular process in which each is separately engaged is required. The feeding of an automatic or a semiautomatic machine tool, or attending a turret lathe in the machine shop; the stitching of a small section of a garment in a clothing factory; the severing of the hide from a definite part of a beef carcass, and a number of other occupations of similar character, demand very little experience and can be done efficiently after a few weeks' instruction and practise. So minute are the subdivisions in such occupations that a man often does little more than a hundredth part of a trade. There are many who are called tailors, boot-makers, cabinetmakers, engineers, carpenters, and so forth, who in reality are acquainted with only a small section of the trade which they profess.

THE UNWILLINGNESS OF EMPLOYERS TO TAKE ON APPRENTICES.

Owing to this disintegration of trades neither employers nor employees are particularly desirous of having apprentices in the workshop. The expense of training apprentices, together with the losses frequently resulting from material spoiled by them, or the impossibility of marketing their product, leads employers to seek additional mechanics from laborers and helpers rather than train apprentices for this purpose. This condition is aggravated by the fact that the apprentices as well as the employees no longer remain steadily in one shop with the same employer, but readily move about from place to place, seeking higher wages and better conditions. However much the trade unions seek to enforce the indenturing of apprentices there is no security that they will serve out their term under one employer. In the glass-bottle manufacturing industry, where the indenture system largely prevails, union employers

frequently complain that apprentices do not serve the five years' term but run away and seek employment in nonunion shops.^(a) The same complaint is made in other industries or trades in which the old system of apprenticeship is still maintained.

UNWILLINGNESS OF JOURNEYMEN TO TRAIN APPRENTICES.

If the modern apprentice is to receive instruction at all in the shop, it must come principally from the foremen and journeymen. But a journeyman naturally has no direct interest in the apprentice (unless, perchance, the apprentice happens to be a son or near relative). He rather regards the apprentice as a rival who may eventually "take the bread out of his mouth." The consequence is that the instruction of the apprentice is frequently neglected. Instead of being trained as an all-round and efficient mechanic, in most trades he is merely put to work at some simple occupation in which he readily becomes a proficient as well as a profitable employee.^(b) The apprentice thus tends to become a specialist. Separated both from the employer and from the journeymen little opportunity is afforded him for practise and instruction in all branches of a trade. In a number of industries which have been badly disintegrated, it is almost impossible under normal conditions for the apprentice to receive a regular course of instruction.

No better illustration is afforded of this condition than the recent changes in the machinist trades. In modern machine shops (except where employers conduct special schools for apprentices), the tendency toward specialization renders the training of apprentices both expensive to employers and troublesome to the journeyman; hence, except in extraordinary cases, very few apprentices are found in the machine shops, and these do not become skilled in the higher grades of work. Boys in the shop are taught to operate one machine and none other. They thus become "specialists" or machine tenders rather than machinists. Moreover, since modern machine tools in a large number of cases require little skill or exertion to operate, a boy with ordinary intelligence after a few months' practise can earn the wages of a competent machinist. Where skill is required in adjusting material to the tools, in a large number of machine shops skilled machinists do the work, while handy men and attendants take charge of the machines, i. e., handle the levers and

^a The National Glass Budget, May 11, 1901. Apprentices that are registered with the trade unions are universally required to serve out their term with one employer, provided the latter desires it. To keep track of the boys who leave their employers before finishing their term of service the unions have enacted rigid laws with reference to runaway apprentices.

^b Joseph Horner, The Training of Workmen, Cassier's Magazine, Vol. XX, p. 110.

watch the operation of the machine. This practise increases the proportion of unskilled to skilled mechanics in the machine shops.^(a)

In machine shops of the present day apprentices or beginners may be separated into five different classes: (1) Those who are taught the branches of lathe work, vise work, plane work, gear cutting and milling—the “all-round” machinist; (2) those who are taught lathe work and vise work only; (3) those who are taught lathe work only, or vise work only, or plane work only; (4) the handy men—second-rate machinists, and (5) the specialists who are simply taught to operate or attend a single machine. The tendency is to restrict apprentices more and more to the last two grades. It is thus difficult for employers to procure skilled machinists and practically impossible for the unions to enforce a definite term of apprenticeship. Consequently a crying demand for skilled machinists and a widespread complaint of the lack of competent and thoroly efficient mechanics has arisen on the part of employers. Several of the large firms thruout the country have taken steps to provide themselves with skilled mechanics. Schools for the training of apprentices have been started in the shops of these firms, wherein thoro instruction in all branches of machinists’ work is afforded the pupils.^(b)

The trend toward the “specialization” of apprentices prevails to some extent in the printing trade, the constant enlargement of printing establishments making this specialization possible. Practically in only small shops and country newspaper offices do apprentices have the opportunity of receiving an all-round training. Compositors are restricted in a great many offices to one line of work, such as display, advertising, straight matter, job work, and so forth. Consequently, as among machinists, there is little opportunity for journeymen to attend to the needs of apprentices. Master printers must accordingly rely chiefly upon the small shops for their supply of thoroly trained journeymen. The same situation prevails in the British printing industry, where compositors are trained in the non-union printing offices in the small towns, and when proficient they flock to the large cities and acquire membership in the unions.^(c)

Multiplication of occupations and specialization of mechanics are constantly going on in much of the work relating to the construction

^a Owing to the practise of placing apprentices upon specialized work, the International Association of Machinists lately inaugurated a policy of organizing the apprentices into separate locals known as apprentice lodges. Eleven of these lodges were organized in 1904.

^b Such schools are found at the Baldwin Locomotive Works, the Brown and Sharpe Manufacturing Company, the Chicago and Northwestern Railway, and the General Electric Company.

^c Webb, *Industrial Democracy*, new edition, 1902, p. 467

of buildings,^(a) despite the fact that the building trades have been affected less by machinery and mechanical contrivances than the manufacturing industries. The erection of large structures is controlled in the main by corporations who take contracts in all large cities. These corporations find it profitable to employ mechanics who are specialists in certain branches of their respective trades, and shift them about from locality to locality, wherever they have need of them. Men of this class find little time or opportunity to instruct boys in the processes of the trade. In fact, no personal tie or intimate relation exists between the beginner and those who have charge of the work, for, except in small towns, the apprentice is not generally known to the foreman or journeyman. The apprentice, moreover, is frequently physically in the way on a large building where all work must be done in order and on time, for no large contractor desires boy labor merely because it can be secured at a lower wage. "The time consumed in teaching the trade to beginners would cause a delay in work, more expensive than the sum saved on wages."^(b) Besides, much of the work done on buildings is of such a heavy character that it can not be effectually done by boys, and consequently adult laborers or helpers are more profitably employed in their stead.

DISLIKE OF BOYS FOR APPRENTICESHIP.

If the apprenticeship system is undesirable to the employers and unsatisfactory to the journeymen, it is even more distasteful to young people desirous of entering upon an industrial career, for boys ordinarily prefer the casual system of learning a trade rather than thru apprenticeship. Various causes have combined to produce this effect, the most important of which are: (1) The long and excessive term of apprenticeship with one employer and the low wages paid to apprentices, especially during the early period of their training; (2) the increasing age at which young people now begin their industrial career, and (3) the possibility of acquiring a craft knowledge as a common laborer.

The long terms of apprenticeship enforced both by employers and trade unions have already been referred to. Boys, wearying of the discipline and restrictions under which they are placed, frequently either refrain from becoming apprentices or when apprenticed leave their employers and apply for positions in unskilled trades.^(c) Indenturing does not necessarily hinder desertion of the master by the apprentice, since very few employers care to take the trouble of legally enforcing an unwilling apprentice to serve out his full term. An appeal to law in such a case is as exceptional an occurrence nowadays as is the payment of wages in kind.

^a Booth, *Life and Labor of the People of London*, Vol. V, p. 100; also *Studies in American Trade Unionism*, edited by Hollander and Barnett, p. 285.

^b *Studies in American Trade Unionism*, edited by Hollander and Barnett, p. 286.

^c Bolles, *Apprenticeship and Industrial Schools in Pennsylvania*, p. 13.

The difficulty of obtaining apprentices in occupations which require a long training for proficiency is well brought out in the custom tailoring trade. The Journeymen Tailors' Union has been very liberal in its apprenticeship regulations, permitting each journeyman to have one apprentice. The returns of locals in 1903 show that there were only 625 apprentices reported, whereas the membership of the union was about 14,500.^(a) As stated by the president of the Journeymen Tailors' Union in his report for 1905, "The world is now moving too rapidly, industrially speaking at least, for anyone to take six, seven, or eight years to learn a trade. * * * The most careful inquiry and investigation has demonstrated that there are but few apprentices to the tailoring trade in the world to-day."^(b)

In a number of trades the great profit of apprentices to employers, where the latter seek to maintain the apprenticeship system, is the low wages paid the apprentice. Commenting upon this condition an editorial in the Plumbers', Gas and Steam Fitters' Official Journal, February, 1906, stated that it is a visionary idea that a boy would follow up a business at the rate of pay stipulated for apprentices in the plumbers' trade. The following is about the usual rate of pay which, with its regular increases, is laid down for apprentices:

	Per day.
For the first six months.....	\$0.50
For the second six months.....	.75
For the second year.....	1.00
For the third year.....	1.25
For the fourth year.....	1.50
For the first six months of the fifth year.....	2.50
For the last six months of the fifth year.....	3.00

"How many practical men," continues the editorial in the Plumbers' Journal, "will admit that a man will work for \$1.50 a day when he has been at the trade four years? Imagine a skilled mechanic with four years' experience working at a job at \$1.50 per day, and his digger, perhaps, unable to speak the English language, receiving \$1.75 or \$2, and sometimes more. How long would an ambitious young man of 18 or 20 years of age work as a mechanic at anything less than \$2 per day? * * * There is no law in any city or State in this United States and Canada that will permit an employer or a boy's parents to bind him out and compel the boy to remain at work where he is assigned, because the laws concerning the binding of apprentices have been abolished about seventy-five years."^(c)

The low wages received by apprentices is further exemplified in the pottery industry. In the most important trades comprised therein apprentices work at a discount from the prevailing journeyman's

^a The Tailor, August, 1903, p. 5.

^b Ibid., February, 1905, p. 6.

^c Plumbers, Gas and Steam Fitters' Official Journal, February, 1906, pp. 1, 2.

scale—i. e., for the same ware turned out by both apprentice and journeyman the apprentice receives a rate of wage which varies from 33 per cent discount off the regular for the first six months of apprenticeship to 10 per cent off for the last year. This discount, together with the small output of a beginner, reduces the earnings of apprentices to a very low average, and discourages intelligent and ambitious boys from becoming skilled workers in the industry.^(a)

In the printing trade a similar practise of paying apprentices at fractional rates of the journeymen's scale prevails in some localities. Thus in the Cincinnati agreement of local Typographical Union No. 3 the scale for apprentices, which is typical of apprenticeship wages prevailing in localities where it is regulated by agreement, is graded as follows:

- First year, one-fourth of journeyman's wages.
- Second year, one-third of journeyman's wages.
- Third year, one-half of journeyman's wages.
- Fourth year, two-thirds of journeyman's wages.

In the fourth year of apprenticeship the printer's apprentice is generally known as a "two-thirder," because of the fact that he is entitled to two-thirds of the prevailing scale of wages.

A still lower apprentice scale of wages than the above prevails in some locals of the Machinists. Thus the agreement entered into between the Erie Railroad Company and the International Association of Machinists, commencing July 1, 1905, contained the following wage scale for apprentices:

	Per hour.
First year.....	\$0.08
Second year.....	.10
Third year.....	.12
Fourth year.....	.14

After the fourth year the apprentice is classed as a journeyman.^(b)

One reason why the small earnings of apprentices tend to discourage boys from acquiring a skilled trade by serving an apprenticeship is the tendency to increase the age at which young people begin an industrial career. We have seen that under the old apprenticeship system boys begin to learn a trade when quite young, 14 years being the usual age at which a boy was indentured. The higher standards of elementary education and compulsory school attendance laws, together with child-labor legislation, have raised the minimum age of an apprentice to 16 years and in some cases even to 18 years. Most

^a An apprentice presser, for example, serves five years before becoming a journeyman, and is paid at the rate of 33½ per cent discount off the scale in his first year, 25 per cent off the second year, 20 per cent off the third year, 15 per cent off the fourth year, and 10 per cent off the fifth year. After five years he receives the journeyman's scale. See Eleventh Special Report of the Commissioner of Labor, p. 670.

^b Machinists' Monthly Journal, August, 1905, Vol. XVII, p. 684.

of the trade unions have rules which prohibit the taking of apprentices before the age of 16, while several place the minimum at 18.^(a) This increase of the age of apprenticeship in many industries arises also from the fact that the work (particularly in the building and metal trades) is of such a heavy, dangerous, or intense character that it can not be readily performed by youths.

The constant tendency toward specialization and simplification of the processes within a trade frequently enables a boy or an ordinary laborer to acquire a working knowledge of a craft without undergoing a regular training. If a general inquiry were made among the mechanics of the different trades as to how they acquired their craft knowledge, the answer in a large number of cases would be, "I merely picked it up." Even in the building trades, in which the apprenticeship system prevails more largely than in other industries, the casual acquisition of craft knowledge is gradually replacing the regular system of apprenticeship. In an investigation of 124 cases in London in 1893, conducted by Mr. Charles Booth,^(b) 118 gave the following particulars regarding the way in which the craft was learned:

METHOD BY WHICH 118 MECHANICS IN BUILDING INDUSTRY LEARNED THEIR TRADES, LONDON, 1893.

Trade.	Number appren- ticed.	Taught by father.	Picked up knowl- edge.
Masons.....	3	2	.....
Bricklayers.....	16	4	4
Carpenters and joiners.....	26	4	1
Plasterers.....	1	7	4
Painters.....	4	3	6
Plumbers.....	1	4	1
Smiths and fitters.....	2	.....	2
Other branches.....	2	1	9
Laborers.....	.....	2	9
All trades.....	55	27	36

^a An investigation conducted by the Wisconsin bureau of labor and industrial statistics in 1889 showed that of 525 workmen in the building trades, 101, or 19 per cent, began to work at their trades after having reached the age of 25 years. Of these 48 were native born and 53 foreign born. The number beginning to work at their trades before 18 years of age were 181, or 34 per cent, 16 per cent being native born and 18 per cent foreign born.—Fourth Biennial Report of the (Wisconsin) Commissioner of Labor and Industrial Statistics, pp. 38, 39.

^b Charles Booth, *Life and Labor of the People of London*, Vol. V, pp. 103, 104.

In 93 of the above cases particular attention has been given as to the locality in which the trade was learned, showing:

LOCALITY IN WHICH 93 MECHANICS IN BUILDING INDUSTRY LEARNED THEIR TRADES, LONDON, 1893.

	In London.	In provinces.
Apprenticed.....	26	30
Learned from father.....	10	7
Picked up.....	17	^a 3
Total.....	53	40

^a Including 1 in America.

In large cities in the United States, where the building trades are less efficiently organized than in Great Britain, the number of workmen who acquire craft knowledge by other means than apprenticeship or the regular form of promotion is undoubtedly relatively more than shown in the above table.^(a) In the plumbing trades particularly many become journeymen without being thoroly trained. An editorial in the official journal of the Plumbers, February, 1906, complains:

There will always be cities or towns enough that are unorganized that will turn out helpers and apprentices in large enough number to supply the demand. And then again, and on the other hand, there will always be some cities where the employers and journeymen will not be judicious enough to regulate the number to be employed as they should be. The scab shop and the nonassociation employers will also continue to manufacture plumbers at a compound rate, and then again, we may be years convincing some old-fashioned and stubborn cities that the trade is overrun by an extensive number of men. * * * The journeyman is also responsible, to a great extent, for this condition of affairs, because in years past, when plumbing was considered more of an art than it is to-day and the wages were comparatively higher, the journeyman, to use the language of the street, "got the swelled head," and thought he must have a boy to carry his overalls around and to shine his tools for him, and walk on the other side of the street with his tool bag lest society should see him with a dirty carpet sack on his shoulder.^(b)

^a The Relation of Labor Organizations to the American Boy and to Trade Instruction, by E. W. Bemis, in Annals of the American Academy of Political and Social Science, September, 1894, Vol. V, p. 218. In the Massachusetts census for 1885, the fact was brought out that in none of the building trades was there one-half and in most cases not one-fourth as many apprentices as the rules of the trade unions would allow. In Wisconsin in 1889, according to the Fourth Biennial Report of the Commissioner of Labor and Industrial Statistics (p. 69), there were only 1 apprentice to every 13 journeymen among masons; 1 to every 12 among carpenters; 1 to every 12½ among painters, while there were 3 apprentices to every 4 journeymen among the plumbers.

^b Plumbers, Gas and Steam Fitters' Official Journal, February, 1906, p. 2.

In view of the fact that the trend of industrial development is continually causing a relaxation of apprenticeship regulations, it is surprising to see the number of trades in which apprenticeship still forms one of the principal and most important methods of entrance. But, as we have already shown, the apprenticeship system of to-day is an entirely different thing from what it was a century ago. In former days the apprentice was usually a member of the employer's household; in most trades at the present time he is merely a boy working with a number of journeymen, doing a similar line of work. Tho a few trade organizations seek to uphold the system of indenturing, an indentured apprentice is a rarity.^(a) Moreover, it must be remembered that a considerable number of the trade unions which retain the traditional apprenticeship system are not successful in enforcing them. Thus, the constitution of the Cigar Makers' International Union provides that all persons learning cigar making or packing must serve a three years' apprenticeship, and that no shop should be granted the label that does not enforce this provision. This provision, however, is admittedly a dead letter, and the union only encourages compliance with the apprenticeship laws in such localities where it is exceptionally strong.^(b) In the printing trade, likewise, both in the United States and in Great Britain, compliance with the apprentice regulations is not universally insisted upon, and the union members are largely recruited from nonunion printers who have acquired their trade without undergoing an apprenticeship.^(c)

But probably the best evidence of the nugatory character of union apprenticeship regulations is the relatively small number of strikes conducted to enforce these regulations. This is shown in the accompanying table of the causes of strikes by leading trades.

^a Studies in American Trade Unionism, edited by Hollander and Barnett, p. 269. Even in France, where the system of small industries prevails more largely than in the United States, indenturing is the exception rather than the rule. An investigation conducted by the French Government in 1901 showed that out of 2,000 apprentices in the printing trade only 41 were indentured. The duration of the indenture was from two to five years. See *Journal de la Société de Statistique de Paris*, Vol. 44, p. 85.

^b Testimony of Ex-President Adolph Strasser, of the Cigar Makers' International Union, Report of the Industrial Commission, Vol. VII, p. 265.

^c Webb, *Industrial Democracy*, new edition, 1902, pp. 464, 465; also Bemis, *The Relation of Labor Organizations to the American Boy and to Trade Instruction*, *Annals of American Academy of Political and Social Science*, September, 1894, Vol. V, p. 217.

PERCENTAGE OF STRIKES DUE TO SPECIFIED GROUPS OF CAUSES, BY LEADING INDUSTRIES, 1887-1894.(a)

Causes.	Build- ing trades.	Stone quarry- ing and cut- ting.	Glass trades.	Print- ing trades.	Tobac- co and cigar manu- facture.	Coal mining and coke manu- facture.	Cloth- ing manu- facture.	Cotton and woolen indus- try.	Boot and shoe indus- try.
For increased wages or union scale.....	37.7	31.6	27.6	46.3	57.3	52.9	44.6	39.1	32.1
Against decrease of wages..	4.0	2.9	4.5	5.3	11.1	24.8	12.4	23.7	24.6
Hours, overtime, holidays..	27.6	31.2	21.4	20.2	.1	2.3	12.8	4.1	.15
Time and methods of pay- ment, fines, etc.....	2.4	9.6	8.2	3.9	.4	8.1	4.9	8.8	4.1
For recognition of union....	8.8	.1	.8	1.2	.2	.7	5.0	.2	4.6
In sympathy with strikers elsewhere.....	7.2	5.3	.4	1.4	23.7	7.2	1.9	.....	4.2
Against nonunion and other obnoxious men, foremen, etc.....	7.7	14.4	7.8	8.7	2.4	1.4	4.9	4.3	10.8
For employment or rein- statement of men, fore- men, etc.....	.3	.4	3.7	4.3	.7	1.8	2.3	6.6	6.1
Regarding apprentices.....	1.1	1.7	12.4	2.0	.8	.....	.1	.....	.5
Against introduction of machinery.....	.1	.....	.....	.02	.8	.....	.2	.6	3.9
Miscellaneous.....	3.1	2.8	13.2	6.7	2.5	.8	10.9	12.6	9.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

^a Report of the Industrial Commission, Vol XVII, p. 656.

It will be seen from this table that strikes regarding apprentices are most frequent in the strongly organized trades, tho even in these relatively few strikes result therefrom. The glass industry naturally has the largest percentage of strikes caused by violation or enforcement of apprenticeship regulations. The glass trades from early times have been very strongly organized, and on account of the high skill required a long apprenticeship is necessary. The trade unions have endeavored, with very considerable success, to enforce strict limitations concerning the number of apprentices, and hence we find that in 12.4 per cent of the total number of strikes in the glass industry from 1887 to 1894 the cause was connected with apprenticeship. Organizations whose craft have undergone a disintegration, causing a decline in skill, can do little to prevent any person from entering the trade at any time he sees fit. Thus in the Cigar Makers' International Union from 1885 to 1901 the ratio of strikes conducted to enforce apprenticeship rules to the total number is comparatively insignificant, as shown by the following table, compiled from the reports of the international president:

PER CENT OF STRIKES IN THE CIGAR MAKERS' INTERNATIONAL UNION TO ENFORCE APPRENTICESHIP RULES, 1885 TO 1901.

Period.	Total number of strikes.	Strikes to enforce apprentice- ship rules.	Per cent of total.
1885-1887.....	167	7	4.2
1887-1889.....	160	11	6.9
1889-1891.....	254	8	3.1
1891-1893.....	275	2	0.7
1893-1896.....	290	20	6.9
1896-1901.....	495	18	3.6

Another evidence of the nonenforcement of apprenticeship regulations is the noticeable absence of provisions relating to apprentices in many trade and industrial agreements. Except in the old handicrafts, which have suffered little deterioration from machinery or new processes, together with the building, the metal, and the printing trades, no provisions regarding entrance to the trade are usually contained in the agreements between employers and employees. Tho such provisions are invariably found in the trade agreements of the glass and pottery trades, granite cutters, pattern makers and iron molders, and a few other metal trades, they are usually absent in the agreements of wage scales entered into by the Boot and Shoe Workers' Union, the Amalgamated Meat Cutters and Butcher Workmen, the textile organizations, and the iron, steel, and tin workers.^(a)

The usual term of apprenticeship prevailing in American unions is from three to four years, tho some organizations enforce a five-years' term. Employers as a class do not object to the length of apprenticeship fixt by the trade unions. In fact, in a few industries (i. e., the glass industry) it is the employers, and not the unions, which insist upon a long term of apprenticeship. The controversy regarding apprentices is generally over the limitation of the number of apprentices, a question with which our study is not directly concerned.

The following table gives in condensed form the period of apprenticeship required by American national and international trade unions and the minimum and maximum ages at which the apprenticeship may be begun when stated in the constitutions and rules of the organizations:

PERIOD OF APPRENTICESHIP REQUIRED BY AMERICAN NATIONAL AND INTERNATIONAL TRADE UNIONS, AND AGE AT WHICH APPRENTICESHIP MAY BE BEGUN.

Union.	Term of apprenticeship (years).	Age (years) when apprenticeship may be begun.	
		Minimum.	Maximum.
International Brotherhood of Blacksmiths.....	^b 4	16	21
Bricklayers' and Masons' International Union.....	3	(c)	(c)
Brotherhood of Boiler Makers and Iron Shipbuilders.....	3	18	21
Brotherhood of Bookbinders.....	4	16	18
United Brotherhood of Carpenters and Joiners.....	4	16	21
Cigar Makers' International Union.....	^b 3	(c)	(c)
Glass Bottle Blowers' Association.....	^d 5	(c)	(c)
Journeyman Stone Cutters' Association.....	4	15	18
United Hatters of North America.....	3	(c)	21
Metal Polishers, Buffers, Platers, Brass Molders, and Brass Workers' Union.....	3	.....	.....
Sheet Metal Workers' International Association.....	^e 3	.....	.....
Iron Molders' Union.....	4	16	.....
Pattern Makers' League.....	4	.....	.....
International Typographical Union.....	4	16	20

^a The unions which adhere most strictly to the apprenticeship regulations are moderately successful in enforcing them. Among these are the Pattern Makers' League of North America, the Bricklayers' and Masons' International Union of America, the National Brotherhood of Operative Potters, and the Table Knife Grinders' National Union of the United States.

^b Minimum.

^d For machine operators, three years.

^c Not reported.

^e Period recommended for adoption by local unions.

The traditional system of apprenticeship, despite its inadaptability to modern industrial conditions, is not without its advantages. Even in the manufacturing trades, which are so unfavorable to the acquisition of an all-round knowledge of a craft, the apprenticeship system is frequently beneficial to both the employer and the mechanic. In the first place, the apprenticeship system assures the employer a supply of trained workmen, possessing intellectual and manual efficiency. A mechanic who has acquired his craft knowledge by a process of difficult training possesses a pride of workmanship which insures greater interest and a better exercise of judgment and skill. Employers in different trades recognize this fact, and occasionally endeavor to reestablish the old apprenticeship system. Several of the large engineering works have instituted courses of instruction for apprentices in their shops, while in the printing trades, the textile industry, and in a number of the building trades, employers in different localities have likewise taken steps to train boys as efficient workmen in their respective trades.

Undoubtedly the greatest advantage of the apprenticeship system accrues to the mechanic himself. By receiving an all-round training he is thereby enabled to work in all branches of the craft, and thus attains greater adaptability to changing employments. Much of the distress caused by the changes that are constantly occurring within a trade can be thus obviated. Furthermore, a thoro training in all branches of a craft divorces the worker from his dependence upon a single machine or a single mechanical process for a livelihood. It gives him a wider intellectual and manual outlook, by means of which he is more readily able to turn from one process to another if the change in trade or fashion should render such a step necessary. He thus becomes more independent, and is better equipped to take his part in the struggle for existence.

SUBSTITUTES FOR APPRENTICESHIP.

THE QUASI APPRENTICESHIP SYSTEM IN MANUFACTURING INDUSTRIES.

In a number of manufacturing industries where machines have replaced the skill of the handicraftsman a method of training is in vogue which is similar to apprenticeship, inasmuch as a person wishing to become a worker undergoes a preliminary course of instruction. The training, however, differs from that of the old apprenticeship system in that, owing to the simplicity of the operation performed, only a few months are usually required for proficiency. Consequently no age qualification for learners prevails. Adults as well as young people starting out to earn a livelihood are admitted as learners.

This degenerate or "quasi apprenticeship" system is the usual method by which a garment maker enters upon his occupation. The

effect of the use of machinery and of the minute subdivision of labor in the clothing industry, as we have already shown, has been the employment of unskilled immigrants as operatives in place of the old-time skilled journeymen tailors. These immigrants ordinarily begin as learners in the small shops of the contractors, where each is taught a single branch of the trade as a reward for his labor, and frequently in return for a stipulated fee. As the learner becomes proficient and is able to turn out a perfect product with moderate rapidity, he generally leaves the employ of the contractor and seeks employment in the factories or larger shops. Since the function of the contractor is that of an employer as well as teacher, his object is to get as much work out of the learner as possible. To accomplish this the learner is confined to a particular kind of work at which proficiency may readily be acquired after a few weeks of practise. The immigrant thus becomes either an operator on pants, a baster or presser on coats, a sleeve maker, a shoulder padder, or a worker in any other of the numerous occupations involved in the making of a garment.^(a)

The common methods of entrance to the occupations of cigar making, boot and shoe making, machine woodworking, and the textile trades are very similar to that prevailing in the clothing industry. Tho skilled hand cigar makers may require several years' training to become thoroly proficient, cigar "rollers" using the "suction table" can readily earn the average wages after two or three months' practise, and "bunch makers" can become proficient in even less time. A large manufacturing firm in New York City, employing a thousand female cigar makers working with the aid of suction tables, maintains a learners' department, where those wishing to learn cigar rolling or "bunch" making are paid a minimum wage of \$3 per week during the time they are taught these occupations. Many of the learners in this department, after a few weeks' instruction, can earn the average wage per week, working at piecework rates.

Hand cigar makers usually acquire their craft knowledge in the shops of the small manufacturers employing immigrant labor or in the country towns. An immigrant wishing to become a cigar maker frequently pays a journeyman or a small manufacturer a stipulated sum to teach him the trade. Beginners, after three or four weeks, can learn to make bunches or to roll cigars, and within three months they can do both operations sufficiently well to have their product

^a Several of the occupations in garment making, however, require more training for proficiency than that which is furnished in the contractors' shops. The pocket makers, for example, being among the most skilful men of the trade, are able to earn \$30 and \$35 per week in the busy season. They require considerable experience and training before they become proficient in their line of work. The coat presser is likewise a skilled mechanic, and receives a higher average of wages than most of the other workers.

placed on the market. Beginners, of course, are employed on the cheapest grades of cigars, since considerable tobacco is spoiled by them while learning.^(a)

The method of entrance to the textile trades is even simpler than that of cigar making or garment making. With the recent improvements in weaving and spinning machinery has come a noticeable decline in the quality and skill of the operatives. Modern automatic looms for weaving are so easily managed that a case is mentioned where a totally inexperienced girl learned to run 14 looms within a week.^(b) As she becomes more experienced the number of looms placed in charge of the learner can be increased until the maximum is reached.^(c) It usually requires one year for an absolutely green male hand to become competent to take charge of the maximum number of looms per weaver in the mill and to be thoroly educated into the work of efficient weaving, but he may be safely given charge of as many as 15 looms after a few weeks' practise.

In the occupation of ring spinning the time required for learning is even shorter than that of weaving. A girl can begin to earn the average rate of wages after two or three weeks' training.^(d)

HELPER SYSTEM OF ENTRANCE TO A TRADE.

The "helper system" of promotion or the progression within a trade is frequently a substitute for apprenticeship. The laborer known as the "helper" must not be confounded with the apprentice. The latter is generally a youth undergoing a training to become a journeyman. He uses a journeyman's tools and is in most trades permitted to do a journeyman's work. The helper, however, except in a very few trades, receives no instruction and is restricted to certain kinds of unskilled employment. As we have already pointed out, he is not allowed to use the journeyman's tools, and in many trades is not under the jurisdiction of the journeyman's union. As his name implies he helps the journeyman, performing for the latter such services as do not require craft proficiency. By reason of his opportunity to watch the work of the journeyman the "helper," or "handy man," is frequently enabled to acquire the craft knowledge of the latter and eventually perform the same services.

A further distinguishing feature of the "helper system" of promotion to a trade is the absence, in most cases, of a definite term of

^a Eleventh Special Report of the Commissioner of Labor, p. 580.

^b Young, *American Cotton Industry*, p. 62.

^c An evidence of the fact that little training is required in the cotton-weaving industry is that the weavers' unions have no rules regarding qualification for membership. Mr. Thos. F. Connolly, secretary of the Lowell Weavers' Union, testified before the Industrial Commission that his union is for the operative, irrespective of skill.—Report of the Industrial Commission, Vol. VII, p. 347.

^d Report of the Industrial Commission Vol. XV, p. 420.

training or experience required for admission to the trade. Helpers are found largely in occupations in which the work is of such heavy character that a greater physical strength is demanded than is ordinarily possessed by youths, hence they are frequently men of mature age. In several of the building trades, such, for example, as tile laying, the helper must carry water, brick, and tiles, and do other heavy work.

The helper system also predominates over apprenticeship in occupations where experience rather than training is essential for proficiency. Under modern methods of running press rooms, for example, a number of years of practical work on small presses is essential for one desiring to take charge of a rotary press, and to perform the higher grades of work. Accordingly the young men who should be rated as apprentices in a press room are feeders and job pressmen, who attend the small presses or who assist in the operation of large cylinder presses. When they have had sufficient experience and have proven themselves capable of taking charge of the operation of a large press, they can be promoted to this higher position. The same methods of promotion or progression within the trade prevail in the electrical trades. The electrical workers are comparatively newcomers in the building trades, and the occupation is still considered to be in its infancy. Many of the journeymen receive their training in the technical schools, but before they become proficient workmen they must gain practical experience in their craft, and accordingly they begin as "helpers" or "juniors." Ordinarily a helper is allowed to do certain lines of work in any branch of the trade, and as soon as he feels confident that he can do journeymen's work, he is given an examination which, if successfully past, entitles him to a journeyman's wages. If not successful, he continues to work as a helper, receiving helper's wages.^(a)

Probably the best illustration of progression within a trade after years of experience and by means of entrance examinations is the method of promoting engine and train men prevailing with American railway companies.^(b) As a general rule engine men in charge of locomotives are promoted from firemen, and conductors are promoted from the position of brakemen. No definite term of service

^a The following clause in the Boston agreement of the electrical workers and the employers (1904) covers this provision: "A helper shall not be allowed to finish work in any branch of the trade. If a helper feels confident he is able to do journeyman work after he has served three years, he shall make application to the classifying board, and if he successfully passes the examination he shall be entitled to a journeyman's wages; if not successful, he shall continue to work as a helper, receiving helper's wages, and can not make application for another examination for six months."—Bulletin of the Massachusetts Bureau of Statistics of Labor, No. 34, p. 367.

^b For a detailed description of admission to the various grades of railway service, see Report of the Industrial Commission, Vol. XVII, pp. 746-774.

is prescribed for either firemen or brakemen, but when a vacancy occurs in the higher positions those among the firemen who are held to be most capable are given the positions. A thoro examination is required of the applicants before they are permitted to become candidates.^(a)

The relation of helper to the journeymen in many occupations is closer and more personal than the relation of apprentices and journeymen. It is usually advantageous to the journeyman to have a competent helper, especially where the piecework system of wage payment prevails. The helper is in most cases under the direct supervision of the journeyman, whose methods and whose workmanship he has an opportunity of observing closely. It is not uncommon for an experienced helper to know as much of a journeyman's work as the journeyman himself; and this, as has been previously explained, frequently leads the employer to hire more helpers at lower wages than received by journeymen. There are, however, different classes of helpers, and the displacement of journeymen by them can occur only in such occupations in which the duties of the helper are very similar to those of the journeymen, or where the former has constant opportunity of closely observing the work of the latter.

Three different groups of helpers may be roughly distinguished: (1) Ordinary laborers, (2) "improvers," "holders on," or "junior workmen," and (3) handy men. The first group, who usually prepare material for the journeymen or who bring them their tools and do other odd jobs, are not serious rivals to the skilled mechanic, and only in rare cases do they strive to enter the ranks of the journeymen. In bricklaying, plastering, and a few other building trades in which there is much unskilled work to be done, practically no opportunity is afforded the helper to become a mechanic, and accordingly the unions of these trades have made no serious efforts to control the building laborers working with them.

The case is different, however, with the second class of helpers, namely, the "holders on," "improvers," or "junior workmen." These men, tho not in training, are enabled to do work similar to that of the journeyman under whose direction they are employed, and if diligent and observing they soon acquire a thoro knowledge of the craft. Since their wages are from 25 to 50 per cent lower than those of the journeyman, they not infrequently strive to attain the rank of journeymen by doing the work of the latter at lower wages. In order to maintain the standard rate, therefore, the journeymen whose work is encroached upon endeavor both to restrict the number of these "illegal men" and to organize them under their jurisdiction. The Brotherhood of Boilermakers, the United Association of

^a For specimen of such examinations, see Report of the Industrial Commission, Vol. XVII, pp. 756-764.

Journeymen Plumbers, the Brotherhood of Electrical Workers, the Tile Layers, and a few other trades have already taken the helpers or junior mechanics under their jurisdiction.

The third class of helpers, the "handy men," are not necessarily attached to journeymen, since they do not aid directly in the work of the latter. They are men who either are employed around the shop at odd jobs, or who do the less skilled parts of work, such as finishing, filling in, and so forth. The skilled mechanics endeavor to restrict this class of workers also.

Owing to the fact that the "helper system" tends to increase the supply of workmen more rapidly than the apprenticeship system, numerous cases of friction have resulted therefrom, both between different grades of workmen in the same trade and between the trade unions on one side and the employers on the other. The history of the plumbing trades, the printing pressmen, the boiler makers, and the machinists is replete with controversies over the method of promotion from the grade of handy man or helper to that of full-fledged journeyman.

The recent controversy in the International Printing Pressmen and Assistants' Union affords the best example of friction between different grades of workers in the same craft. Three classes of pressmen are found in the printing trades: (1) Web or cylinder pressmen (men who take charge of large cylinder presses, such as are used in newspaper offices), (2) job pressmen, who are the ordinary pressmen of the printing shops (men who mix the inks and adjust the chases of type on the printing presses), and (3) the feeders or assistants. All three branches of the craft are comprized in one international union, the International Printing Pressmen and Assistants' Union. In large towns and cities each branch maintains separate local organizations. The web pressmen are the highest skilled in the trade, since in addition to a knowledge of inks and color mixing they must understand the mechanism and action of rotary cylinder presses over which they have charge. Each web pressman in charge of the press crew requires three or four assistants for the operation of large presses. Owing to the development of artistic printing the standard of skill required of pressmen has been considerably enhanced, and the different grades of pressmen included in the one organization represent, in a way, the progress that has taken place within the trade. Pressmen are ordinarily recruited from the assistants or feeders. According to the constitution of the International Printing Pressmen's Union of 1905 all assistants in the web press room must come from the Assistants' Union, and the Assistants' Union shall have the right to organize all help in the web press room. Apprentices to the web pressmen are taken from the Feeders and Job Pressmen's union.^(a)

^a See Constitution of the International Printing Pressmen and Assistants' Union, revised and adopted June, 1905, By-laws, Article III, sections 1 and 2.

Considerable controversy in the International Union has resulted from the practical application of this rule. The young men who do the work in press rooms that should be rated as apprentices' work are quite numerous, and this makes it difficult to rotate them in line of succession. Altho previous to 1901 a four-years' apprenticeship of "practical presswork" and a rigid examination as to competency was nominally required for admittance to the ranks of journeymen pressmen, an assistant, if he was able to earn the pressmen's scale, was given permission to work as a pressman until the period of his nominal apprenticeship had expired. He was then eligible to membership in a pressman's local, and when transferring his membership he could not then be charged an initiation fee greater than the difference between the initiation fee of the local from which he withdrew and of that which he joined. Under these conditions promotion from one grade to another was not so much a matter or question of training and experience as the maintenance of the standard rate. The union has not, however, succeeded in defining with distinctness the qualifications for each grade of pressmen. As a usual thing a boy generally spends a number of years working in a printing office as a feeder, either assisting a journeyman or operating the small presses and doing other odd jobs about the press rooms. When the employer or foreman places him in charge of a larger press, at which he is competent to earn the prevailing scale of wages, he is ordinarily regarded as a journeyman pressman. This system of promotion deprived the higher-grade mechanics of the control over the admission to their branch of the trade, and consequently made it possible for employers to readily replace them. The president of the International Union stated to the thirteenth annual convention (1904) that "Pressmen are claiming that the so-called helper is in too many instances an illegitimate pressman with the garb of unionism thrown around him by a feeders' union."^a

The web pressmen complained further that the feeder, or assistant who does the work both of the feeder and of a pressman, was only standing in the way of the competent pressman. Consequently an effort was made in several localities to establish an apprenticeship period for such assistants and job pressmen as were desirous of taking charge of cylinder presses. In 1902 Web Pressmen's Local No. 40, of Denver, refused to admit a member of an assistants' union who had worked four years in a press room and who had been given charge of a press at journeymen pressmen's wages. The pressmen held that he was not entitled to the position he had received at the hands of his employer, since he had not complied with their apprenticeship rules. Disputes of this character occurred in other locals,

^a Proceedings of the Thirteenth Annual Convention, 1901, p. 341.

the web pressmen contending that as long as any of their members were out of employment no assistant should be allowed the right of advancement.^(a)

In the annual conventions of 1904 and 1905 of the International Printing Pressmen and Assistants' Union the controversy over the proper method of advancing pressmen from the lower to the higher grades of work continued to be the bone of contention. In 1904 a law was passed making it compulsory upon the pressmen's locals to admit to membership all union men who were operating job presses, provided that the latter had complied with the laws and rules of the assistants' and feeders' unions.^(b) The next year the convention endeavored to put an end to the dispute between job pressmen and web pressmen by passing a law granting the right to a pressman to run any kind of printing press, provided he earned the standard rate fixed by the workmen of that class and transferred his membership to the local having jurisdiction over the same.

The controversy over the "helper" in the plumbers' organization, tho of a different character, was no less interesting than that of the pressmen. Here the conflict raged between the employers and mechanics. Both in England and the United States it has long been the practise for journeymen plumbers to be recruited largely from helpers. According to Sidney and Beatrice Webb:

The employers in London do not engage boys or apprentices to assist the men in plumbing, or to learn the trade. The custom is for each plumber to be attended by an adult laborer, known as the "plumber's mate." Any employer is at liberty to promote a plumber's mate to be a plumber whenever he chooses, provided only that he pays him the plumber's standard rate. Notwithstanding the fact that the number of "plumber's mates" who form the class of learners, is four or five times as numerous as would suffice to recruit the trade, the London branches of the United Operative Plumbers' Society effectively maintain a high standard rate.^(c)

^a Proceedings of the Fifteenth Convention, 1903, p. 369.

^b In 1902 the feeders and job pressmen, dissatisfied with their treatment by the web pressmen, inaugurated a movement to secede from the International Pressmen's Union and form a separate international organization. They claimed that the web pressmen endeavored to prevent their advancement. The proposition was voted on by the union and defeated.

^c Industrial Democracy, new edition, 1902, pp. 475, 476.—A different attitude of journeymen plumbers toward the "mate" is expressed in Charles Booth's *Life and Labor of the People of London*, Vol. V, p. 62: The "plumber's mate" stands in the same position as the laborer of the other sections [building trades], but it seems to be admitted that if he is employed at all he must find some of his work in the use of the plumbers' tools for subordinate purposes, and thus be in training to do plumbers' work. This is a bitter source of complaint with many plumbers, but others admit that a smart mate can not help the plumber without picking up a great deal of the trade, and if by this means he becomes thoroly efficient the plumbers have no right to keep him from getting the full rate of wages.

The effect in the United States of employing helpers has not been so favorable to the journeyman as in London. For a number of years the plumbers' unions have complained that the employment of helpers results in an oversupply of plumbers.^(a) The general complaint of the journeymen is that the helper, after a year or two, does not care to become an apprentice, but gets a helper of his own and works as a journeyman. In 1896 the United Association of Plumbers began a movement to abolish the "helper" from the craft and to prohibit the further employment of apprentices until the oversupply of journeymen in the trade was reduced.^(b) This policy is defended on the ground that some of the employers made it a practise to have most of their work done by helpers, tho they charged their customers no less than if they had paid journeymen's wages. The officials of the union claim that the movement is not intended to be permanent, and that it has never been strictly enforced. In 1900 it was stated that no helpers were employed in Chicago, Cleveland, Omaha, Denver, and St. Louis. In the St. Louis agreement between the plumbers and the employers of that year a clause provided that there "will be no more apprentices or juniors hired during the term of this agreement, but all apprentices who are registered by the joint association shall be permitted to complete their time, which will be 5½ years, and at the expiration of same shall receive journeymen's wages; but in no case shall there be more than one apprentice employed in a shop at one time." The agreement with the New York Master Plumbers' Association for the year beginning July 1, 1902, contained a similar clause.^(c)

Many of the employers in the plumbing trade were in favor of temporarily dispensing with apprentices, claiming that the oversupply of journeymen was tending to increase the number of small contractors. It is a comparatively easy matter for a journeyman plumber possessing a kit of tools to open a small shop of his own and undertake small plumbing contracts. It is these small shops which, according to the report of the president of the union in 1900, are becoming a most menacing evil, causing the introduction of an immense number of apprentices into the trade and thus tending to decrease the wages of the journeymen.^(d)

^a Plumbers, Gas and Steam Fitters' Official Journal, February, 1906.

^b Mr. Kelley, president of the United Association of Journeymen Plumbers, testified before the Industrial Commission that the term of apprentices at that time was four years as a helper, to be followed by two years of apprenticeship, i. e., work under instruction. When the full term was completed the apprentice received a certificate from the journeymen's organization, and sometimes from the organizations of journeymen and of employers jointly.—Report of the Industrial Commission, Vol. VII, p. 966. See also Eleventh Special Report of the Commissioner of Labor, p. 373.

^c Eleventh Special Report of the Commissioner of Labor, p. 362.

^d Report of the Industrial Commission, Vol. XVII, p. 160. Also Eleventh Special Report of the Commissioner of Labor, p. 373.

Where it has been found impracticable to do away entirely with helpers the union has endeavored to restrict their number, and in drawing up agreements both among plumbers and steam fitters provision is generally made that not more than one helper be allowed to a journeyman, and that no helper or apprentice should be sent to do jobs upon which a journeyman is not employed. This restriction prevents employers from sending out apprentices and helpers to do repair jobs.

It is also a growing practise, both among steam fitters and plumbers, for the local unions to conduct examinations of apprentices and helpers who seek admittance as journeymen. The constitution of the United Association of Journeymen Plumbers prescribes that each local shall have an examining board, where circumstances will permit, to examine into the qualifications of candidates for membership. Any member who moves to another city must satisfy the requirements of the local examining board if it is demanded, even tho he has past an examination in the city from which he came. In a number of localities these examinations are conducted jointly by the local employers' association and the union. A strike was caused in St. Louis, February, 1899, by the journeymen refusing to accede to a rule past by the employers, that any fitter, having been rejected by the examining board of the union, shall be examined by a committee of the master plumbers' association, and "if found competent shall be permitted to work in any shop that will employ him."^(a)

In New York recently the employing steam fitters complained that the union made the requirements of the examination intentionally severe in order to keep the membership low.^(b) The president of the international association, in his report to the fourteenth convention, stated that in other localities there was also considerable complaint that the examinations were too severe, and he advised as a remedy that these examinations be under the control of the international union instead of the locals.

In a number of States and localities there are laws prescribing a special theoretical examination of plumbers and gas and steam fitters. The aim of these laws is to protect the public against the doing of poor work by incompetent journeymen. The unions are strongly in favor of such State and municipal regulations regarding entrance to their trade, and endeavor to have them enforced wherever possible.

With the advent of machinery in the boiler-making and shipbuilding industries, the helper and handy man are likewise tending to encroach upon the work of the journeyman boiler maker and displace

^a Report of the Industrial Commission, Vol. VII, p. 949.

^b Proceedings of the Fourteenth Convention of the United Association of Journeymen Plumbers, p. 29. See also Eleventh Special Report of the Commissioner of Labor, p. 375.

the apprenticeship system. Details of all kinds in connection with boiler construction, which were formerly made by hand, can now be purchased in the open market in the same manner as traps, drums, and other parts formerly made by the plumber. A modern steam boiler is in every detail a machine-made article. From the shaping and bending of the plates to the fastening of the rivets and the tightening of the joints machine work is paramount; likewise the riveting of ships' hulls, deemed impossible other than by hand a few years ago, is now done by portable squeezers operated by water or by compressed air.^(a) The most difficult and critical work the boiler maker formerly had to execute by hand is now delivered exactly from dimensions as per blueprint furnished. Consequently much of the work done by the skilled boiler maker has been relegated to "holders on" and handy men.

The question of limiting the number of helpers in the trade and restricting them to certain lines of work is thus becoming a serious matter to be dealt with by the journeymen boiler makers. In 1900 the president of the Brotherhood of Boiler Makers discussed the question in his report and urged the organization of helpers and handy men under the jurisdiction of the Brotherhood, as follows:

The handy man question should receive ample attention, for in protecting and placing them we are protecting ourselves. They should become members of our craft and help us as well as be helped. I don't mean all classes of helpers, only those who can take our places in cases of emergency. Their work should be set aside for them the same as ours, and then it would be an easy matter to help protect each other.^(b)

Following this advice in 1900, helpers and handy men were first admitted to the local lodges of journeymen boiler makers in the United States.^(c) The year following separate lodges of helpers and handy men were organized under the title of the Helpers' Division of the Brotherhood of Boiler Makers and Iron Shipbuilders, the constitution of the Brotherhood providing that a helpers' subordinate lodge may be organized in any locality "with the consent of the regular subordinate lodge of the district," such lodges to be governed and installed by the executive council.^(d) The helper and handy man division is thus not a self-governing branch, merely having the privilege of electing one vice-president of the International Brotherhood. Moreover, its constitution and by-laws are formulated by the

^a Cassier's Magazine, Vol. XX, p. 109.

^b Journal of the Brotherhood of Boiler Makers and Iron Shipbuilders, August 1, 1900, p. 231.

^c In England helpers and handy men had already been organized under the jurisdiction of the Boiler Makers' Union.

^d Constitution of the Brotherhood of Boiler Makers and Iron Shipbuilders (1901), p. 35.

executive council of the International Brotherhood of Boiler Makers and Iron Shipbuilders. In July, 1905, the Brotherhood of Boiler Makers and Iron Shipbuilders had organized 83 helpers' lodges under its jurisdiction. There were about 300 journeymen's local lodges.^(a)

TRADE AND TECHNICAL EDUCATION.

Trade and technical education is regarded by many employers as the logical substitute for the old system of apprenticeship. Industrial and technical schools have accordingly been established in a number of localities, and are found at present in the important industrial centers in the United States. They may be roughly grouped into three classes: (1) The manual-training schools; (2) the trade schools, and (3) technical schools and colleges.

The manual-training schools do not directly aim to teach their pupils a trade. Their paramount purpose is rather to train boys and girls in the use of tools and accustom them to manual exercise. An educational discipline is thereby acquired which may be useful in all walks of life, but which does not necessarily add directly to the earning capacity of the pupil. The other two classes, however, have as their principal aim the preparation of pupils for a trade or profession thru which they may gain a livelihood. The trade school proposes to give a beginner or apprentice a thoro and practical knowledge of some manual occupation. The technical school, on the other hand, is a high-grade trade school, in which both a craft and the scientific principles upon which it is grounded are taught.^(b) Such schools and colleges, combining a high intellectual as well as a manual training, are intended for foremen and superintendents rather than handicraftsmen and mechanics.

The trade schools which limit their instruction to the teaching of manual occupations are alone designed to take the place of the old apprenticeship system. These ordinarily may be divided into two classes: (1) Those in which the practical knowledge of a craft is taught to a beginner, and (2) those in which men who are already working at the trade, but who wish to improve their training and workmanship, are given instruction. A number of the important trade schools of the United States combine both of these features.

^a The wages of the different grades of workmen in the boiler-making and ship-building industry are shown in the following scale, taken from the agreement with Bartlett, Hayward & Co., of Baltimore, February, 1904, and published in the Journal of the Brotherhood of Boiler Makers and Iron Shipbuilders, March 1, 1904, p. 161:

	Per day of nine hours.
Boiler makers.....	\$3. 37½
"Holders on"	2. 50
Heaters	2. 25
Helpers	2. 00

^b Eighth Annual Report of the Commissioner of Labor, 1892, p. 15.

The trade schools whose primary aim is to give a pupil an efficient practical knowledge of some handicraft, so as to enable him to straightway enter as a journeyman after completing the courses of instruction, usually restrict their instruction to matters pertaining directly to the craft, and seek to turn out trained mechanics in as brief a time as possible. It is this species of trade education which is most distasteful to the trade unions, and against which they are constantly combating. As a general rule the boys completing their courses in these schools do not immediately become journeymen, but begin as helpers, and in some instances as apprentices.

The trade schools, whose primary object is the technical improvement of the workman in the trade he is already following, seem well adapted to present conditions. The statement frequently heard that a trade can not be taught in a school is in certain respects true. But to give instruction to a workman who is already a mechanic, which renders him capable of doing his work better and more quickly, and in addition furnishes him with a general idea of the part played by his effort in the production of commodities to which he probably contributes only a small portion of the labor and skill, is of practical value in almost every occupation. Where practical instruction in an industry is given in a school it is impossible to reproduce conditions prevailing in actual factories and workshops. A boy, in order to become a thoro mechanic must receive his training under the same conditions that he may meet with when a full-fledged journeyman. Hence, the classes to which practical work in a trade is taught should be largely confined to students already actually engaged in some branch of the trade. "For while it is obvious to all practical men that trades can not be successfully taught in a school, yet much can be done to supplement the training of the workshop by affording facilities for practical work in those branches of a trade which young men get few opportunities of learning in their shops."^a Furthermore, instruction should be given by practical men who, in addition to special ability in their own particular trade, possess a general knowledge of the scientific or artistic principles which are more or less intimately connected with their industry.

In considering trade education, it must be borne in mind that not all occupations can be successfully taught in a school. It is only such trades which, in addition to practical workmanship, require a theoretical and intellectual training on the part of the mechanic. For this reason the building and engineering trades are more largely taught in trade schools than are other occupations. The plumbing trades (usually popular courses in trade schools), for example, demand a training in the principles of sanitation for proficient workmanship,

^a Workers on their Industries, edited by Galton, p. 5.

while a knowledge of mathematics and mechanical drawing is a valuable acquisition to those desiring to become proficient machinists or pattern makers.

The trade unions, tho conceding that schools in which workmen can receive instruction in their trade are a benefit, with few exceptions do not encourage trade education other than that acquired by the apprentice in the shop. They accordingly grant no exemption from the full term of apprenticeship to graduates of trade schools. The schools not opposed by the trade unions are those which are open only to apprentices and mechanics, and in which the instruction aims primarily to supplant the practical training acquired in the workshop. On the other hand, schools which attempt to make mechanics are bitterly opposed by the skilled trades as a direct interference with apprenticeship regulations. Such schools, it is claimed, not only create an abnormal supply of embryo workmen, but also lower the standards of skill and efficiency in a craft and have a depressing effect upon wages.

In several localities the agreements between employers and unions of bricklayers and masons contain provisions regarding special instruction of apprentices in elementary or trade schools. Thus, the "Working Rules and Apprenticeship System of the Master Builders' Association and the Bricklayers' Union No. 3, of Boston, Mass.," contain the following statement:

Recognizing the fact that special instruction in the fundamental features of the bricklaying trade (which instruction shall comprehend education of both mind and hands, so that the individual shall gain a proper knowledge of quantity and strength of materials and the science of construction) is of as much importance as special instruction in other trades or professions, and, realizing that the chances of an apprentice to get as much instruction as he is entitled to, while at work on buildings, is necessarily limited, the parties to these rules agree that they will join in an effort to establish an institution in this city (Boston) where all the trades shall be systematically taught; that when such school is established they will unite in the oversight and care of the same and will modify these rules so that a reasonable deduction shall be made from the term of an apprentice (not less than three years as fixt at present) by virtue of the advantage gained thru instruction in said school.^a

Similarly, the arbitration agreement between the Chicago Masons and Builders' Association and Bricklayers and Stone Masons' Union No. 21, April 1, 1903, to May 1, 1905, provides:

The contractor taking an apprentice shall engage to keep him at work for nine consecutive months in each year and to see to it that during the remaining three months of the year the apprentice attends school. The apprentice shall, during the months of January, February, and March, each year, attend a technical school acceptable to

^a Seventeenth Annual Report of the Commissioner of Labor, 1902, p. 415.

the joint board, and a certificate that he has done so will be required before he is allowed to work during the year.^(a)

With the important exception of the absence of practical experience, the trade and technical education has much the same advantages as the old apprenticeship system. The great drawback to the present-day worker is the high uncertainty that invention and new processes create, causing disarrangement of industrial conditions and leading to a maladjustment in the demand and supply of certain kinds of labor. This condition must be met by enabling the worker to readily adapt himself to the changing employments. He should be made versatile, and if a mechanical device supplants him in his branch of the trade he should be enabled to adjust himself to another branch. Much distress due to changing industrial conditions would thus be mitigated. Moreover, the worker would thus get rid of the notion that he is destined to spend his life in the repetition of some simple process. Trade education, combined with practical shop experience, seems to be adapted to these purposes, and it therefore should be made accessible to as many mechanics as possible. The workman who is skilled in the use of tools, and in addition has a thoro understanding of the technical processes of his trade, is more capable of accommodating himself to new employments. He is therefore more competent to improve his social conditions, since he readily moves from a less to a more remunerative occupation in his line of work, a mobility which conduces to industrial independence and robs inventions of their terrors.

The most serious danger connected with trade and technical education is the tendency on the part of the schools to hastily turn out workmen with only a smattering of a trade, and then thrust them upon the labor market as a constant menace to the thoroly trained and skilled mechanic. The mechanic's opposition to private trade schools of this sort is consequently well founded. Many, conducted in a purely commerical spirit, do not teach the pupils the value of skilled trades.

Another danger in trade and technical education to be reckoned with is the possibility of overemphasizing the theoretical at the expense of the practical instruction. The splitting up of trades and occupations in many industries seems to render technical training of little practical value to the worker. Frequently the sacrifice and energy expended in attaining technical knowledge of the trade is not requited to the worker when he enters his industrial career, especially when he is confined to a narrow range of work and has very little opportunity of utilizing to its full advantage the theoretical knowledge he has obtained in the trade school. Young men who are educated are not content to remain manual workers, and seek employment more adapted to their higher intellectual training.

^a Bulletin of the Bureau of Labor, No. 47, p. 909.

COST OF INDUSTRIAL INSURANCE IN THE DISTRICT OF COLUMBIA.

BY S. E. FORMAN.

INTRODUCTION.

The purpose of the present article is to show the cost of insurance in the District of Columbia to those whose earning capacity is small, and who are consequently unable to purchase insurance in the ordinary way, by annual, semiannual, or even quarterly payments. The cost of ordinary commercial insurance is also discust in order to show by comparison the much higher prices paid for insurance by the very poor who purchase it with small weekly premium payments. The main subject of inquiry has been the cost of what is known as industrial insurance, inasmuch as insurance of this class is carried almost exclusively by the working people and the poor.

The subject has been treated strictly from the point of view of the insured. The economies of life insurance viewed from the standpoint of the companies have not been discust. The forms under which the several insurance companies are organized, whether stock or mutual, the financial condition and cost of management of the companies, the merits or demerits of this or that kind of policy, are subjects lying entirely outside the scope of this investigation. In the purchase of many necessities, the poorer the purchaser the higher the price he must pay for his commodity, and the purpose of this inquiry is simply to learn to what extent the same thing is true in respect to the purchase of insurance.

In the annual reports of the superintendent of insurance for the District of Columbia life insurance companies are divided into three classes: Regular life insurance companies, life-assessment associations, and fraternal beneficial associations. Under this classification a regular life insurance company is understood to be one which insures for a fixt premium to be paid annually, quarterly, monthly, or weekly, according to the terms of the policy. The quality of regularity resides in a fixedness and unchangeableness in the amount and number of the premiums named in the contract. In a regular company the sum or sums to be paid as premiums are thus always ascertainable

from the terms of the policy. A life-assessment association is one where the amount to be paid by the policy holder as a premium is subject to change. Under the assessment plan a levy may be made upon the policy holder sufficient to meet any losses sustained by the company, and the levy may take the form of a higher premium or a greater number of premiums. A fraternal beneficial association is declared by the District Code (sec. 749) to be "a corporation, society, order, or voluntary association, formed or organized and carried on for the sole benefit of its members and their beneficiaries, and not for profit, having a lodge system with ritualistic form of work and representative form of government, making provision for the payment of benefits in case of death. Each such association may make provision for the payment of benefits in case of sickness, temporary or permanent physical disability, either as a result of disease, accident, or old age."

Of the three kinds of insurance thus recognized by the insurance department of the District of Columbia, the first and second kinds, regular and life-assessment, are conducted for the sake of profit—the premiums are paid into the treasuries of business concerns organized for the purpose of profit. The third kind, fraternal beneficial insurance, yields no pecuniary profit to those who conduct it—all that is paid into the treasury, minus a small sum for clerk hire and other necessary expenses, finds its way back to the members of the fraternity or to their beneficiaries. The subject of insurance, therefore, may be divided into two main topics, insurance for profit, or commercial insurance, and insurance without profit, or purely fraternal insurance. This article will make comparison only of the cost of insurance conducted in the District of Columbia for the sake of profit.

Before passing to the main subject a rapid glance will be taken at the industrial conditions which prevail in the District.

INDUSTRIAL CONDITIONS.

The city of Washington—for the District of Columbia and Washington are coextensive—is unlike any other American city in its industrial organization. It has no large mills or factories, no great jobbing houses, no extensive shipping or railway interests. Of course the effects of this are seen in the character of the city's population.

Moreover, nearly one-third of the entire population is colored and the great mass of these belong to the common labor class, employed either at unskilled labor or in domestic or personal service. Street railways, the skilled occupations, and the professions afford employment to but few.

If the occupations of the people of Washington be compared with the occupations of the people of other cities containing a nearly equal population the unique features of industrial conditions in the

Capital will at once be appreciated. Washington, with its population of 278,718 (Census of 1900), Detroit with its population of 285,704, and Milwaukee with its population of 285,315 may be taken for such a comparison. The table below shows for the three cities the number of persons engaged in those occupations where the number involved is at least 500 in some one of the cities:

PERSONS 10 YEARS OF AGE OR OVER ENGAGED IN CERTAIN OCCUPATIONS IN 1900 IN
WASHINGTON, DETROIT, AND MILWAUKEE.

[From the Twelfth Census of the United States, 1900.]

Sex and occupation.	Washing- ton.	Detroit.	Milwaukee.
MALES.			
Clerks and copyists.....	11,523	4,781	3,245
Servants and waiters.....	4,898	1,301	834
Printers, lithographers, and pressmen.....	2,842	1,293	1,305
Messengers and errand and office boys.....	1,345	603	541
Porters and helpers in stores.....	921	225	235
Draymen, hackmen, and teamsters.....	3,994	2,924	3,313
Laborers (not specified).....	12,476	11,828	10,635
Masons (brick and stone).....	1,153	745	821
Stenographers and typewriters.....	521	251	271
Watchmen, policemen, firemen, etc.....	1,667	1,450	947
Barbers and hairdressers.....	860	654	658
Janitors and sextons.....	511	325	299
Plumbers and gas and steam fitters.....	1,074	895	903
Bartenders.....	581	501	505
Electricians.....	461	524	430
Merchants and dealers (not wholesale).....	3,945	4,066	3,417
Street-railway employees.....	817	889	710
Bakers.....	622	661	722
Salesmen.....	2,644	2,665	2,846
Blacksmiths.....	775	983	959
Butchers.....	569	896	837
Hucksters and peddlers.....	526	928	525
Tin plate and tinware makers.....	469	495	917
Agents.....	1,551	2,094	1,997
Boatmen and sailors.....	223	820	548
Engineers and firemen (not locomotive).....	1,116	1,714	1,303
Restaurant and saloon keepers.....	612	834	1,217
Boot and shoe makers and repairers.....	496	877	1,188
Tailors.....	616	1,060	1,338
Bookkeepers and accountants.....	837	1,734	1,756
Manufacturers and officials.....	925	1,918	1,816
Painters, glaziers, and varnishers.....	1,441	2,460	1,896
Brewers and maltsters.....	118	248	1,277
Steam-railroad employees.....	1,185	2,131	2,378
Carpenters and joiners.....	2,298	3,510	3,228
Machinists.....	1,392	1,896	2,966
Iron and steel workers.....	300	3,198	4,404
Saw and planing mill employees.....	58	188	585
Coopers.....	27	183	668
Stove, furnace, and grate makers.....	5	1,109	170
Brass workers.....	26	943	372
Tobacco and cigar factory operatives.....	94	805	636
Leather tanners and curriers.....	14	135	2,169
FEMALES.			
Servants and waitresses.....	15,231	6,981	6,430
Laundresses.....	7,192	1,018	1,177
Clerks and copyists.....	4,697	1,382	545
Nurses and midwives.....	1,311	642	564
Teachers.....	1,598	1,297	1,255
Housekeepers and stewardesses.....	529	484	357
Dressmakers.....	2,993	2,949	3,134
Seamstresses.....	813	914	1,042
Stenographers and typewriters.....	708	943	897
Bookkeepers and accountants.....	482	768	571
Saleswomen.....	1,320	1,108	1,709
Milliners.....	344	589	771
Tailoresses.....	214	986	790
Hosiery and knitting mill operatives.....	-----	135	862
Tobacco and cigar factory operatives.....	16	1,503	240

The comparison shows plainly that Washington is a city in which an unusually large number of people are engaged in personal service. The total laborers, servants (male and female), waiters and waitresses, and laundresses and nurses in Washington outnumber those in Detroit similarly classified by nearly two to one and those in Milwaukee by more than two to one. Moreover, the table shows that the people of Washington are not engaged to any considerable extent in the ordinary occupations of the industrial world. The steel and iron workers, brassworkers, boot and shoe workers, and the like, who are quite numerous in Detroit and Milwaukee, in Washington are of little or no numerical importance. It will be seen that the large number of persons in Washington dependent upon the very lowest-paid occupations has a direct bearing upon the insurance business of the city.

COST OF ORDINARY INSURANCE.

Insurance conducted for profit, or commercial insurance, is designated as either ordinary or industrial. It is called ordinary when the premiums are paid annually, semiannually, or quarterly; industrial when the premiums are paid weekly or monthly. Ordinary insurance is characterized by large and infrequent premium payments; industrial insurance by small and frequent premium payments. Since, as a rule, only the well to do can make large payments, it may be said that ordinary insurance is purchased by the prosperous and that industrial insurance is purchased by the poor. The policy conditions also of these two kinds of insurance differ widely from each other. In order that there may be some basis for measuring the cost of insurance to the poor a very brief consideration will first be given of the cost of ordinary insurance.

The premiums paid in 1903 in the District of Columbia for commercial insurance, the amount of insurance, and the number of policies in force December 31, 1903, were as follows:

NUMBER OF POLICIES AND INSURANCE IN FORCE DECEMBER 31, 1903, AND PREMIUMS PAID IN DURING YEAR.

[From the Report of the Department of Insurance of the District of Columbia for the year ending December 31, 1903. In the Report of the Department of Insurance the premiums on 3,728 ordinary policies for \$3,152,619, issued by companies writing both ordinary and industrial insurance, were not separately reported. Using as a basis the average premium on all ordinary insurance for which the premiums paid were reported, the premiums on this \$3,152,619 of ordinary insurance have been estimated at \$116,000 and included in this table under the premiums paid in on ordinary insurance during year.]

Kind of insurance.	Premiums paid in during year.	Policies in force December 31, 1903.	
		Number.	Amount.
Ordinary.....	\$1,960,429.98	23,271	\$53,263,631.43
Industrial (including policies in assessment associations) ..	1,024,753.09	207,596	24,127,215.84
Total.....	2,985,183.07	230,867	77,390,847.27

It is thus seen that while the premiums paid for ordinary insurance were greatly in excess of those paid for industrial insurance, the number of policies in force on the industrial plan was vastly greater than the number of ordinary policies. It is also seen that the average amount of an ordinary policy (nearly \$2,300) is about twenty times as great as the average amount of an industrial policy (\$116).

The rate at which companies sell ordinary insurance depends altogether upon the kind of policy bought, and the kinds of policies are almost as many as the wit of man has been able to devise. For the purposes of this article all those kinds of policies into which the idea of investment is blended with the idea of insurance may be ignored.

This study is concerned here chiefly with insurance considered as a means of protection—insurance pure and simple. What rates do the policy holders who meet their premiums in the ordinary way pay for insurance where the idea of protection alone enters into the contract? This question is answered precisely enough by the following table, which shows the average rate charged for nonparticipating policies by six companies which transact by far the larger part of the nonparticipating business in the District:

AVERAGE RATE CHARGED FOR \$1,000 OF INSURANCE BY SIX LEADING COMPANIES FOR ORDINARY NONPARTICIPATING POLICIES.

[The figures upon which this table is based are taken from the "Handy Guide to Premium Rates, Applications, and Policies of American Life Insurance Companies," 1905.]

Age of insured (years).	Average annual premium per \$1,000.	Age of insured (years).	Average annual premium per \$1,000.	Age of insured (years).	Average annual premium per \$1,000.
21.....	\$15.30	35.....	\$22.10	49.....	\$37.16
22.....	15.63	36.....	22.81	50.....	38.84
23.....	16.01	37.....	23.55	51.....	40.62
24.....	16.37	38.....	24.35	52.....	42.50
25.....	16.76	39.....	25.20	53.....	44.52
26.....	17.18	40.....	26.10	54.....	46.70
27.....	17.63	41.....	27.04	55.....	48.98
28.....	18.08	42.....	28.04	56.....	51.53
29.....	18.57	43.....	29.12	57.....	54.16
30.....	19.08	44.....	30.26	58.....	56.97
31.....	19.63	45.....	31.47	59.....	59.98
32.....	20.19	46.....	32.77	60.....	63.19
33.....	20.79	47.....	34.13		
34.....	21.42	48.....	35.60		

The rates given in the above table are approximately those charged not only in the District of Columbia but everywhere in the United States by responsible concerns for pure insurance on nonparticipating policies when the premium is paid annually. They contain all the elements of ordinary insurance cost, including that of business management, and since they represent the experience of all the great companies thru a long period of time they may safely be taken as a standard of reference when comparisons are desired.

Since the cost of ordinary insurance in the District is the same as that charged everywhere, and since one company charges almost precisely the same as another for the same amount of protection, the subject of the cost of ordinary insurance requires no extended comment and admits of no elaborate comparisons.

COST OF INDUSTRIAL INSURANCE.

Industrial insurance is organized with the premium payments adjusted to meet the necessities of people working for a small wage. Policies are issued in very small amounts, the average being far below \$500, which is the maximum limit in most industrial companies. Premiums are payable weekly, most frequently in amounts of 5 or 10 cents, on Mondays, and collectors call for them regularly at the homes. Such a method involves not only an army of agents for the soliciting and collecting, but a very large number of clerks and officials for the keeping of such a multitude of small weekly accounts and for the efficient administration and supervision of the complicated machinery of such an organization.

All of this detail of collecting, bookkeeping, etc., entails necessarily much additional expense and this expense is largely increased by—

1. The inevitable losses resulting from the many policies which are allowed to lapse before the companies are compensated for writing the policies or even the agent for soliciting them;
2. The higher mortality rate resulting from the character of the medical examinations, which, on 5 and 10 cent policies, are necessarily superficial; and
3. The higher mortality rate due to the large proportion of infantile risks.

The premium charges for ordinary insurance have been established by many years of experience and have assumed almost the character of mathematical constants. Industrial insurance, on the other hand, is a production of more recent times and its charges have not to the same extent been subjected to the various tests of an extended experience. But the volume of industrial insurance has already swollen to enormous proportions, and is growing at an accelerated rate. More than 15,000,000 industrial policies are in force in the United States and the amount of industrial insurance approximates \$2,000,000,000. "There is scarcely a block in our large cities or a remote hamlet in the country section which does not receive a visit from at least one industrial agent each week." ^(a) The extent of industrial insurance among the poor in the District of Columbia is strikingly illustrated by the fact that in 19 poor families investigated, numbering 124 persons, 119 industrial policies were found to be in force. ^(b)

^a The Standard, March 18, 1904, p. 277.

^b Bulletin of the Bureau of Labor, No. 64, p. 613.

Two kinds of protection are purchased on the industrial plan, the ordinary form of policy which gives protection in case of death alone, and the policy which combines protection in case of sickness and accident with protection in case of death. Hence two kinds of industrial insurance must be examined: (1) *Industrial life insurance*, and (2) *Industrial combination insurance* which gives sick, accident, and death benefits. In the District of Columbia companies that conduct the second kind of industrial insurance do not to any great extent conduct the first kind also. These two kinds of insurance will be considered separately.

INDUSTRIAL LIFE INSURANCE.

It has been seen that the total number of industrial policies of all kinds in force in the District of Columbia at the end of 1903 was 207,596; that the holders of these policies paid during the year as premiums \$1,024,753.09; and that the amount of industrial insurance in force on December 31, 1903, was \$24,127,215.84. In round figures it may be said that \$20,000 is paid every week by the working people of Washington for keeping in force over 200,000 policies which carry protection to the amount of over \$24,000,000. The amount of this insurance that is in life policies only and the amount in combination policies is shown in the following table:

NUMBER OF POLICIES AND INSURANCE IN FORCE DECEMBER 31, 1903, AND PREMIUMS PAID IN DURING YEAR FOR COMPANIES ISSUING LIFE POLICIES ONLY AND FOR COMPANIES ISSUING COMBINATION POLICIES.

[From the Report of the Department of Insurance of the District of Columbia for the year ending December 31, 1903. In the Report of the Department of Insurance the premiums on 3,728 ordinary policies for \$3,152,619, issued by companies writing both ordinary and industrial insurance, were not separately reported. Using as a basis the average premium on all ordinary insurance for which the premiums paid were reported, the premiums on this \$3,152,619 of ordinary insurance have been estimated at \$116,000 and deducted to ascertain the premiums paid in on industrial life policies during year as shown in this table.]

Kind of insurance.	Premiums paid in during year.	Policies in force December 31, 1903.	
		Number.	Amount.
Industrial life insurance.....	\$864,059.61	178,675	\$23,000,129.92
Industrial combination insurance (combining sick, accident, and death benefits).....	160,693.48	28,921	1,127,085.92
Total.....	1,024,753.09	207,596	24,127,215.84

It will be seen from the foregoing table that the great bulk of the industrial insurance is in the companies which issue life policies only. Thus, 86 per cent of all the industrial policies in force at the end of 1903 in the District of Columbia was in these companies; of the premiums paid in during 1903 on industrial policies 84 per cent was to these companies; and the insurance in force carried by these companies represented 95 per cent of all the industrial insurance.

In Washington practically all of the business of industrial insurance for payment of benefits in case of death only is done by five companies, all of which carry on a business outside the District. Two of these companies count their agents by the thousands; their policy holders by the millions, and their premium receipts by the tens of millions. One of the companies employs 250 agents in Washington alone. The manner in which the industrial life business in the District is distributed among the several companies is indicated in the following table:

NUMBER OF INDUSTRIAL LIFE POLICIES AND INSURANCE IN FORCE DECEMBER 31, 1903, AND PREMIUMS PAID IN DURING YEAR FOR EACH COMPANY.

[From the Report of the Department of Insurance of the District of Columbia for the year ending December 31, 1903. In the Report of the Department of Insurance the premiums on 3,721 ordinary policies for \$3,147,869 issued by Company No. 1 and 7 ordinary policies for \$4,750 issued by Company No. 5 were reported in combination with the premiums on industrial policies. Using as a basis the average premium on all ordinary insurance for which the premiums paid were reported, the premiums on this ordinary insurance have been estimated at \$115,825 and \$175, respectively, and deducted to ascertain the premiums on industrial life policies as shown in this table.]

Company.	Premiums paid in during year.	Policies in force December 31, 1903.	
		Number.	Amount.
Company No. 1.....	\$541,681.88	109,052	\$15,039,999.00
Company No. 2.....	147,269.44	31,836	3,867,895.00
Company No. 3.....	83,134.70	21,048	2,411,951.00
Company No. 4.....	45,985.23	10,043	1,229,011.00
Company No. 5.....	45,988.36	6,696	451,273.92
Total.....	864,059.61	178,675	23,000,129.92

Like the ordinary companies, the industrial companies offer a great variety of policies. There is the industrial whole-life policy, the industrial endowment policy, the industrial paid-up policy, the industrial infantile policy.

INDUSTRIAL WHOLE-LIFE POLICY.

This policy corresponds quite closely in character to the nonparticipating policy whose rates were stated (page 785) in connection with the subject of ordinary insurance. Just as the rates for ordinary insurance are almost identical in the different companies, so an almost perfect equality of rates exists among the several industrial life companies. In respect to whole-life policies this is shown by the following table:

AMOUNT OF INSURANCE GIVEN BY FIVE COMPANIES DOING BUSINESS ON THE INDUSTRIAL PLAN IN THE DISTRICT OF COLUMBIA, THE WEEKLY PREMIUM BEING 5 CENTS AND CONTINUING THRUOUT THE WHOLE LIFE OF THE INSURED.

[A weekly premium of 10 cents doubles the amount of the policy. The full amount of the policy as stated below is paid only in case of death after the policy has been in force for one year.]

Age at next birthday (years).	Amount of policy.	Age at next birthday (years).	Amount of policy.	Age at next birthday (years).	Amount of policy.
10.....	\$120	27.....	\$72	44.....	\$44
11.....	118	28.....	<i>f</i> 71	45.....	42
12.....	116	29.....	69	46.....	41
13.....	112	30.....	67	47.....	39
14.....	108	31.....	66	48.....	38
15.....	<i>a</i> 103	32.....	64	49.....	37
16.....	<i>b</i> 100	33.....	62	50.....	35
17.....	94	34.....	60	51.....	34
18.....	92	35.....	59	52.....	32
19.....	<i>b</i> 89	36.....	57	53.....	31
20.....	<i>c</i> 87	37.....	55	54.....	30
21.....	<i>d</i> 84	38.....	54	55.....	28
22.....	<i>e</i> 82	39.....	52	56.....	27
23.....	80	40.....	50	57.....	26
24.....	78	41.....	49	58.....	25
25.....	76	42.....	47	59.....	23
26.....	74	43.....	45	60.....	22

a Amount of policy issued at age 15 by one company is \$104.

b Amount of policy issued at age 19 by one company is \$90.

c Amount of policy issued at age 20 by one company is \$88.

d Amount of policy issued at age 21 by one company is \$86.

e Amount of policy issued at age 22 by one company is \$84.

f Amount of policy issued at age 28 by one company is \$70.

The rates of the various industrial life companies are practically identical. They differ widely, however, from those charged for ordinary insurance, and very useful comparisons may be instituted between industrial rates and ordinary rates. By taking the rates given on this page and on page 785 and computing the amount of protection the policy holder gets for each dollar expended, the figures shown in the following table are obtained. In this table the amount of protection purchasable with an annual premium expenditure of \$1 made in the industrial way (in weekly payments) may be compared with the amount of protection purchasable with the same premium expenditure made in the ordinary way (in annual payments). The table shows also the percentage of difference which exists between the amounts.

AMOUNT OF INDUSTRIAL OR OF ORDINARY NONPARTICIPATING INSURANCE PURCHASABLE FOR EACH \$1 OF THE ANNUAL PREMIUM EXPENDITURE, AND PER CENT OF EXCESS OF ORDINARY OVER INDUSTRIAL INSURANCE.

[The full amount of the industrial insurance as stated below is paid only in case of death after the policy has been in force for one year.]

Age of insured (years).	Insurance purchasable for each \$1 of the annual premium expenditure.			Age of insured (years).	Insurance purchasable for each \$1 of the annual premium expenditure.		
	Industrial.	Ordinary.	Per cent of excess of excess of ordinary over industrial.		Industrial.	Ordinary.	Per cent of excess of excess of ordinary over industrial.
21.....	\$32.31	\$65.36	102	41.....	\$18.85	\$36.98	96
22.....	31.54	63.98	103	42.....	18.08	35.66	97
23.....	30.77	62.46	103	43.....	17.31	34.34	98
24.....	30.00	61.09	104	44.....	16.92	33.05	95
25.....	29.23	59.67	104	45.....	16.15	31.78	97
26.....	28.46	58.21	105	46.....	15.77	30.52	94
27.....	27.69	56.72	105	47.....	15.00	29.30	95
28.....	27.31	55.31	103	48.....	14.62	28.09	92
29.....	26.54	53.85	103	49.....	14.23	26.91	89
30.....	25.77	52.41	103	50.....	13.46	25.75	91
31.....	25.38	50.94	101	51.....	13.08	24.62	88
32.....	24.62	49.53	101	52.....	12.31	23.53	91
33.....	23.85	48.10	102	53.....	11.92	22.46	88
34.....	23.08	46.69	102	54.....	11.54	21.41	86
35.....	22.69	45.25	99	55.....	10.77	20.42	90
36.....	21.92	43.84	100	56.....	10.38	19.41	87
37.....	21.15	42.47	101	57.....	10.00	18.46	85
38.....	20.77	41.07	98	58.....	9.62	17.55	82
39.....	20.00	39.68	98	59.....	8.85	16.67	88
40.....	19.23	38.31	99	60.....	8.46	15.83	87

The foregoing table shows that the workingman of 30 years of age, for example, who must purchase his insurance by weekly payments, obtains only \$25.77 of protection for each dollar that he pays in, while the well-to-do policy holder of the same age, who can purchase his insurance by annual payments, obtains \$52.41 of protection, or more than twice as much.

PAID-UP VALUES AND CASH-SURRENDER VALUES OF INDUSTRIAL LIFE POLICIES.

A majority of the industrial companies doing business in the District make a provision for a paid-up policy after the premiums have been paid for a certain period. Thus one company has in its policies the following provisions:

If after the payment of the weekly premium hereon for five or more years, this policy shall become void by reason of default in the payment of premiums, the company agrees to issue a nonparticipating paid-up policy for an amount computed according to the first table below, the said paid-up policy to be continued in force for the full expectation of life of the insured, at the date of issue of the paid-up policy, according to the second table below, provided that this policy shall be legally surrendered to the company and application for said paid-up policy made in writing on the blank obtainable from the company for that purpose within eight weeks after said default.

It is not necessary to give the tables referred to above in full but it will be profitable to compare the paid-up values of a typical ordinary.

nonparticipating policy with those guaranteed in the industrial life policy from which the above provisions have been quoted. Below is a table which makes such a comparison easy. Two columns show the paid-up values guaranteed for each \$1 of annual premiums on the industrial life and on the ordinary nonparticipating policy, the policy issuing at the age of 35 years. A third column gives the per cent of paid-up insurance guaranteed by the ordinary policy in excess of that guaranteed by the industrial policy for each \$1 of annual premium.

PAID-UP VALUE OF AN INDUSTRIAL LIFE POLICY AND OF AN ORDINARY NONPARTICIPATING POLICY ISSUED AT THE AGE OF 35.

After premium has been paid—	Paid-up insurance guaranteed for each \$1 of annual premium expenditure.		
	Industrial insurance.	Ordinary nonparticipating insurance.	Per cent of excess of ordinary over industrial.
5 years.....	\$3. 33	\$5. 51	65
6 years.....	4. 01	6. 74	68
7 years.....	4. 69	7. 93	69
8 years.....	5. 40	9. 25	71
9 years.....	6. 08	10. 57	74
10 years.....	6. 76	11. 89	76
15 years.....	10. 09	17. 22	71
20 years.....	13. 24	21. 94	66

Most of the industrial policies provide for a cash-surrender value. The accompanying table gives the cash-surrender value guaranteed by one of the policies of a company doing a large industrial business in the District. For purposes of comparison a typical exhibit of the cash-surrender values guaranteed by the same company on an ordinary nonparticipating policy is also given.

CASH-SURRENDER VALUE OF AN INDUSTRIAL LIFE POLICY AND OF AN ORDINARY NONPARTICIPATING POLICY AFTER PREMIUMS HAVE BEEN PAID FOR 20 YEARS.

Cash-surrender value at end of 20 years.				Cash-surrender value at end of 20 years.			
Age (years).	Industrial (weekly premium 10 cents).	Ordinary (proportioned to an annual premium of \$5.20).	Per cent of excess of ordinary over industrial.	Age (years).	Industrial (weekly premium 10 cents).	Ordinary (proportioned to an annual premium of \$5.20).	Per cent of excess of ordinary over industrial.
21.....	\$33	\$53. 26	61	41.....	\$38	\$60. 73	60
22.....	34	54. 19	59	42.....	38	60. 39	59
23.....	34	54. 79	61	43.....	38	59. 83	57
24.....	35	55. 55	59	44.....	38	59. 31	56
25.....	35	56. 47	61	45.....	37	58. 56	58
26.....	35	57. 03	63	46.....	37	57. 86	56
27.....	36	57. 75	60	47.....	36	56. 96	58
28.....	37	58. 36	58	48.....	36	56. 10	56
29.....	37	58. 86	59	49.....	36	55. 05	53
30.....	37	59. 47	61	50.....	35	53. 96	54
31.....	38	59. 97	58	51.....	35	52. 81	51
32.....	38	60. 36	59	52.....	33	51. 62	56
33.....	38	60. 66	60	53.....	33	50. 30	52
34.....	38	61. 03	61	54.....	32	49. 03	53
35.....	39	61. 29	57	55.....	31	47. 66	54
36.....	39	61. 26	57	56.....	30	46. 36	55
37.....	39	61. 48	58	57.....	30	45. 03	50
38.....	39	61. 40	57	58.....	29	43. 68	51
39.....	39	61. 23	57	59.....	27	42. 33	57
40.....	38	60. 94	60	60.....	27	41. 04	52

INDUSTRIAL INFANTILE POLICY.

In very recent years the industrial companies have undertaken to extend the benefits of insurance to young children. The number of infantile policies can not be ascertained accurately from insurance reports, but special investigation covering a limited region shows that about one-fourth of all industrial policies are written upon the lives of children under 10 years of age.

In the policies of the industrial life companies there is an infantile clause which specifies the benefits that are to arise when death occurs within the infantile period, that is, between the ages of 1 and 10 (sometimes 12). The following table shows the amount of the death benefit usually guaranteed in an industrial infantile policy for a weekly premium of 10 cents:

DEATH BENEFITS PAYABLE ON AN INDUSTRIAL INFANTILE POLICY FOR A WEEKLY PREMIUM OF 10 CENTS.

Age at next birth- day (years).	Amount payable if death occurs after the policy has been in force—											
	Under 3 months.	3 months or under 6 months.	6 months or under 9 months.	9 months or under 1 year.	1 year or un- der 2 years.	2 years or un- der 3 years.	3 years or un- der 4 years.	4 years or un- der 5 years.	5 years or un- der 6 years.	6 years or un- der 7 years.	7 years or un- der 8 years.	8 years.
2.....	\$16	\$20	\$24	\$30	\$34	\$40	\$48	\$58	\$110	\$160	\$200	\$240
3.....	18	22	28	34	40	48	58	102	150	200	240	.....
4.....	20	26	32	40	48	58	94	140	200	240	.....	.....
5.....	22	28	36	48	58	86	130	190	240	.....	.....	.....
6.....	24	32	44	58	78	120	180	240	.....	.....	.....	.....
7.....	28	38	52	70	110	170	240	.....	.....	.....	.....	.....
8.....	32	44	70	100	160	240	.....	.....	.....	.....	.....	.....
9.....	40	56	100	150	240	.....	.....	.....	.....	.....	.....	.....

For a weekly premium of 5 cents death benefits of half the amounts stated in the foregoing table are paid.

YOUNG PEOPLE'S ENDOWMENT POLICY.

Besides whole-life infantile policies, some of the industrial companies issue children's endowment policies, the nature of which may be learned from the table which follows. Under the form of policy to which this table relates the endowment term is, in all cases, twenty years, and the amount of the endowment is \$50 for each 5 cents of weekly premium, the amount being due and payable twenty years from date of issue of policy:

DEATH BENEFITS PAYABLE ON AN INDUSTRIAL 20-YEAR ENDOWMENT POLICY IF DEATH OCCURS DURING THE ENDOWMENT PERIOD, FOR A WEEKLY PREMIUM OF 5 CENTS.

Age at next birthday (years).	Amount payable if death occurs during the—									
	1st year.	2d year.	3d year.	4th year.	5th year.	6th year.	7th year.	8th year.	9th year.	10th year.
2.....	\$8. 00	\$10. 00	\$12. 00	\$14. 00	\$16. 00	\$18. 00	\$20. 00	\$22. 50	\$25. 00	\$27. 50
3.....	9. 00	11. 00	13. 00	15. 00	17. 00	19. 00	21. 00	23. 00	25. 00	27. 50
4.....	10. 00	12. 00	14. 00	16. 00	18. 00	20. 00	22. 00	24. 00	26. 00	28. 00
5.....	11. 00	13. 00	15. 00	17. 00	19. 00	21. 00	23. 00	25. 00	27. 00	29. 00
6.....	12. 00	14. 00	16. 00	18. 00	20. 00	22. 00	24. 00	26. 00	28. 00	30. 00
7.....	13. 00	15. 00	17. 00	19. 00	21. 00	23. 00	25. 00	27. 00	29. 00	31. 00
8.....	14. 00	16. 00	18. 00	20. 00	22. 00	24. 00	26. 00	28. 00	30. 00	32. 00
9.....	15. 00	17. 00	19. 00	21. 00	23. 00	25. 00	27. 00	29. 00	31. 00	33. 00

Age at next birthday (years).	Amount payable if death occurs during the—									
	11th year.	12th year.	13th year.	14th year.	15th year.	16th year.	17th year.	18th year.	19th year.	20th year.
2.....	\$30. 00	\$32. 50	\$35. 00	\$37. 50	\$40. 00	\$45. 00	\$50. 00	\$50. 00	\$50. 00	\$50. 00
3.....	30. 00	32. 50	35. 00	37. 50	40. 00	45. 00	50. 00	50. 00	50. 00	50. 00
4.....	30. 00	32. 50	35. 00	37. 50	40. 00	45. 00	50. 00	50. 00	50. 00	50. 00
5.....	31. 00	33. 00	35. 00	37. 50	40. 00	45. 00	50. 00	50. 00	50. 00	50. 00
6.....	32. 00	34. 00	36. 00	38. 00	40. 00	45. 00	50. 00	50. 00	50. 00	50. 00
7.....	33. 00	35. 00	37. 50	40. 00	42. 50	45. 00	50. 00	50. 00	50. 00	50. 00
8.....	34. 00	36. 00	38. 00	40. 00	42. 50	45. 00	50. 00	50. 00	50. 00	50. 00
9.....	35. 00	37. 00	39. 00	40. 00	42. 50	45. 00	50. 00	50. 00	50. 00	50. 00

It will be noticed that during the infantile period the full face value of the policy does not accrue, either in the case of a whole-life or an endowment policy. In all the infantile contracts the amount to be paid is calculated upon the age of the child at the time of death.

CHARACTERISTIC FEATURES OF INDUSTRIAL LIFE POLICIES.

As a rule the terms of the regular industrial life policies are liberal. The amount of the benefit is to be paid promptly upon the death of the insured. Sometimes it is to be paid within twenty-four hours after death is proven. All the companies insert a provision like this:

If the insured shall die within six calendar months from the date hereof [the date of the execution of the policy] the company will pay only one-fourth of this sum [the amount of the policy]. If the insured shall die after six months and within one year from the date hereof the company will pay only one-half of this sum. After one year from its date the policy will be in force for its full amount.

The following privileges and concessions are found in most of the industrial life policies issued by the regular industrial companies:

1. If the terms of the policy are not satisfactory or if its conditions are not accepted and agreed to, the policy may be surrendered for cancellation within a short period, and if surrendered the premiums already paid are refunded.
2. The policies are usually incontestable after two years—sometimes after one year.
3. When the death of the insured occurs while a premium is in arrears not exceeding four weeks the company usually agrees to pay

the policy, notwithstanding the arrears. Of course the amount paid is decreased by the amount of the arrears.

4. Should the policy become void in consequence of nonpayment of premiums it may be renewed if not more than 52 premiums are due, upon payment of all arrears and the presentation to the company of evidence that the insured is in sound health.

5. The insured may change the beneficiary at any time.

6. The insured may engage in any occupation except in the military or naval service in time of actual war.

LAPSES OF INDUSTRIAL LIFE POLICIES.

A most important topic in connection with the cost of industrial insurance is lapses. Whatever may be the effect of a lapse upon the finances of the insurance company there can hardly be any question as to the effect upon the person purchasing insurance; a lapse must be regarded as involving a loss. The industrial policy, it seems, comes easy and goes easy. In the District of Columbia during 1903 there were, according to the report of the department of insurance, more than 30,000 lapses of industrial policies, distributed among the several regular industrial companies as follows:

Company No. 1.....	12, 976
Company No. 2.....	4, 108
Company No. 3.....	8, 661
Company No. 4.....	1, 541
Company No. 5.....	3, 285
Total.....	30, 571

CONCLUSIONS AS TO THE COST OF REGULAR INDUSTRIAL LIFE INSURANCE.

The greatest of the industrial companies claims the following advantages for industrial insurance:

It is especially adapted to persons of moderate means.

It costs 5 cents per week and upward.

No initiation fee is charged.

No increase of payment is required.

Premiums are collected weekly at the homes of policy holders.

All ages from 2 next birthday to 70 are taken.

Claims are payable promptly at death.

Males and females are taken at the same cost.

Only healthful lives are insured.

The nine advantages urged above may be reduced to one: Industrial insurance enables the poorer classes to pay for their insurance weekly in small amounts. This substantial and cogent advantage gives to industrial insurance all its vigor and prosperity. This convenience of payment, however, is purchased at great cost. An examination of the foregoing tables illustrates strikingly the general truth, which the poor are often made to realize so keenly, that their dollar

has much less purchasing power than that of the well to do. Whenever the industrial rates are compared with the ordinary rates the former are found to be much higher than the latter. In the matter of whole-life insurance industrial rates are practically 100 per cent higher than the ordinary rates. The paid-up values of ordinary policies are from 65 per cent to 76 per cent higher than those guaranteed in industrial policies and a similar difference exists between the cash-surrender values of the two kinds of policies.

INDUSTRIAL COMBINATION (SICKNESS, ACCIDENT, AND LIFE) INSURANCE.

The industrial insurance issued by the companies that have thus far been discusst, the companies doing a life business only, constitutes over nine-tenths of all industrial insurance in force in the District of Columbia. But the insurance written by the other class of industrial companies (the assessment industrial companies) has an importance far greater than would appear from an examination of the amount of insurance in force, for the reason that these companies draw their premium receipts almost entirely from the poorer classes and especially from the colored wage-earners of the common labor and servant classes. There are in force in the District of Columbia nearly 30,000 policies which in addition to insuring the life carry an indemnity for disability by accident and by disease. The companies which sell this kind of insurance are in nearly every instance of the assessment type. They are not compelled by law to carry a reserve, and some of them have no substantial funds of any kind but meet their losses with the premiums collected from week to week. Others, however, have reserve funds sufficient, in the opinion of the managers, to meet all probable obligations. These assessment companies should not be confounded with the fraternal beneficial associations which furnish insurance to their members on a purely cooperative plan, all the money that is paid into the treasury, minus a small sum for clerk hire and other necessary expenses, being distributed to the members or their beneficiaries. The assessment companies engaged in the business of industrial insurance are, on the other hand, commercial organizations conducting the business for profit.

The absence of a reserve in an assessment company is supposed to be offset by the flexibility of the premium. The terms of the contract of an assessment policy assume the existence of an association, the members of which have agreed to make good the losses as they arise. It is not, therefore, the managers of an assessment company that are liable for the indemnities, but the policy holders themselves. This is plainly set forth in the policy of every assessment company. The following clauses extracted from the policies of several assessment

industrial companies doing business in the District will illustrate this feature of the assessment contract:

1. The association is not required by law to maintain a reserve. The association reserves the privilege to make additional assessments in case the weekly payments are not sufficient to meet all claims.

2. This insurance is granted in consideration of the premium hereinbefore stated, which shall be paid to the company on or before every Monday during the continuance of this contract, and of any additional sum that may be required.

3. That in case of epidemic sickness, numerous accidents, or widespread increase of mortality, or when the weekly payments are not sufficient to meet all claims, the board of directors of this association reserve the right to levy additional weekly assessments; and whenever assessments are levied and members are duly notified of the same, failure to pay such assessments after a period of thirty days from date of notice shall suspend such member from benefits until such extra assessments are paid. These extra assessments shall not be levied until after the assets of the association, exclusive of the capital stock, are exhausted.

4. The insured hereby agrees to pay two semiannual assessments not to exceed the weekly premium paid on the policy, and in the event of unusual casualties, sickness, and mortality any other assessment that may be levied by the board of directors.

5. The board of trustees shall have the power to levy extra assessments when needed or raise the rate if necessary.

Altho the right of the assessment companies to levy all necessary sums is unquestionable, nevertheless, as a matter of practise, extra assessments are seldom called for. The assessment companies must compete with the regular industrial companies, and a company which should habitually levy extra assessments would soon find its business disappearing. The policy clauses giving the company the right to levy additional assessments have an important legal significance, but they do not materially affect the premiums paid. A 5-cent weekly premium in an assessment company means a yearly premium of \$2.60, and seldom more than that.

The real difference between the business conducted by the assessment industrial company and that conducted by the regular industrial company resides in the nature of the insurance. The regular industrial company insures against death, and against death alone. The assessment industrial policy offers indemnity for sickness and accident as well as insurance upon death. Theoretically, a more comprehensive form of insurance could not well be devised.

Four of the assessment industrial companies of the District issue life as well as combination policies, yet the great bulk of the assessment business consists of insurance carrying sick, accident, and death benefits. This business is done almost entirely among the poorer classes and especially among the colored wage-earners of the common labor and servant classes, and for this reason has an importance much

greater than is indicated by the amount of insurance in force. The business is distributed among twelve companies in the manner shown in the following table:

NUMBER OF POLICIES AND AMOUNT OF INDUSTRIAL COMBINATION (SICK, ACCIDENT, AND LIFE) INSURANCE IN FORCE DECEMBER 31, 1903, AND PREMIUMS AND ASSESSMENTS COLLECTED DURING YEAR.

Company.	Premiums and assessments collected during year.	Policies in force December 31, 1903.	
		Number.	Amount.
Company No. 6.....	\$41,777.47	6,104	\$143,207.50
Company No. 7.....	^a 27,073.74	^a 5,301	^a 246,465.75
Company No. 8.....	^a 17,696.20	^a 3,259	^a 129,722.00
Company No. 9.....	14,304.91	2,796	97,860.00
Company No. 10.....	^a 12,404.48	^a 2,624	^a 102,787.50
Company No. 11.....	^a 9,065.05	^a 2,105	^a 81,007.42
Company No. 12 (^b).....	24,087.70	2,097	182,400.00
Company No. 13.....	7,435.29	2,097	60,089.50
Company No. 14.....	2,838.76	1,127	61,416.00
Company No. 15.....	283.38	612	3,700.25
Company No. 16.....	2,666.80	554	15,365.00
Company No. 17.....	1,059.70	245	3,065.00
Total.....	160,693.48	28,921	1,127,085.92

^a Includes some policies for payment of death benefits only.

^b Premiums paid monthly.

It has been seen that the premium rates for regular industrial insurance on the whole-life plan are pretty much the same in all the companies. Where the insurance policy carries the triple indemnity against sickness, accident, and death the charges of one company differ widely from those of another. The rates charged by the several assessment industrial companies of the District selling combination insurance may be learned from the tables following. It will be observed that the sick and accident indemnities in any given schedule are always the same. It will be noticed also that in all the companies the age element is treated very broadly while in one company it is ignored altogether.

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 6.

Weekly premium (cents).	Age at next birthday (years).	Sick and accident benefits paid.		Death benefit.
		Amount per week.	Number of weeks.	
5.....	3 to 40	\$1.25	^a 12	\$12.50
5.....	41 to 50	1.00	^a 12	10.00
5.....	51 to 60	.75	^a 12	7.50
10.....	10 to 40	2.50	^a 12	25.00
10.....	41 to 50	2.00	^a 12	20.00
10.....	51 to 60	1.50	^a 12	15.00
15.....	15 to 40	3.75	^a 12	37.50
15.....	41 to 50	3.00	^a 12	30.00
15.....	51 to 60	2.25	^a 12	22.50
20.....	15 to 40	5.00	^a 12	50.00
20.....	41 to 50	4.00	^a 12	40.00
20.....	51 to 60	3.00	^a 12	30.00
25.....	20 to 40	6.25	^a 12	62.00
25.....	41 to 50	5.00	^a 12	50.00
25.....	51 to 60	3.75	^a 12	37.00

^a For accident, 7 weekly benefits only.

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 7.

Weekly premium (cents).	Age at next birthday (years).	Sick and accident benefits paid.		Death benefits.
		Amount per week.	Number of weeks.	
5.....	2 to 40	\$1.25	10	\$12.50
5.....	41 to 50	1.00	10	10.00
5.....	51 to 60	.75	10	7.50
10.....	10 to 40	2.50	10	25.00
10.....	41 to 50	2.00	10	20.00
10.....	51 to 60	1.50	10	15.00
15.....	15 to 40	3.75	10	37.50
15.....	41 to 50	3.00	10	30.00
15.....	51 to 60	2.25	10	22.50
20.....	18 to 40	5.00	10	50.00
20.....	41 to 50	4.00	10	40.00
20.....	51 to 60	3.00	10	30.00
25.....	18 to 40	6.00	10	65.00
25.....	41 to 50	5.00	10	50.00
25.....	51 to 60	3.75	10	37.50

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 8.

5.....	4 to 42	\$1.25	10	\$12.50
5.....	42 to 48	1.00	10	10.00
5.....	48 to 55	.75	10	7.50
5.....	55 to 60	.50	10	5.00
10.....	8 to 42	2.50	10	25.00
10.....	42 to 48	2.00	10	20.00
10.....	48 to 55	1.50	10	15.00
10.....	55 to 60	1.00	10	10.00
15.....	15 to 42	3.75	10	37.50
15.....	42 to 48	3.00	10	30.00
15.....	48 to 55	2.25	10	22.50
15.....	55 to 60	1.50	10	15.00
20.....	18 to 42	5.00	10	50.00
20.....	42 to 48	4.00	10	40.00
20.....	48 to 55	3.00	10	30.00
20.....	55 to 60	2.00	10	20.00

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 9.

5.....	2 to 40	\$1.25	a 10	\$12.50
5.....	41 to 50	1.00	a 10	10.00
10.....	6 to 40	2.50	a 10	25.00
10.....	41 to 50	2.00	a 10	20.00
15.....	10 to 40	3.75	a 10	37.50
15.....	41 to 50	3.00	a 10	30.00
20.....	15 to 40	5.00	a 10	50.00
20.....	41 to 50	4.00	a 10	40.00
25.....	18 to 40	6.25	a 10	62.00
25.....	41 to 50	5.00	a 10	50.00
30.....	20 to 40	7.00	a 10	65.00
30.....	41 to 50	6.00	a 10	60.00
35.....	20 to 40	8.00	a 10	100.00
35.....	41 to 50	7.00	a 10	70.00
40.....	20 to 40	8.00	a 10	150.00
50.....	20 to 40	10.00	a 10	150.00

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANIES NO. 10 AND NO. 11.

5.....	2 to 40	\$1.25	b 10	\$12.50
5.....	41 to 50	1.00	b 10	10.00
5.....	51 to 55	.75	b 10	7.50
10.....	8 to 40	2.50	b 10	25.00
10.....	41 to 50	2.00	b 10	20.00
10.....	51 to 55	1.50	b 10	15.00
15.....	15 to 40	3.75	b 10	37.50
15.....	41 to 50	3.00	b 10	30.00
15.....	51 to 55	2.25	b 10	22.50
20.....	18 to 40	5.00	b 10	50.00
20.....	41 to 50	4.00	b 10	40.00
20.....	51 to 55	3.00	b 10	30.00
25.....	18 to 40	6.00	b 10	65.00
25.....	41 to 50	5.00	b 10	50.00
25.....	51 to 55	3.75	b 10	37.50

a For accident, 5 weekly benefits only.
b For sickness 12 and for accident 7 weekly benefits paid by company No. 10

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 13.

Weekly premium (cents).	Age at next birthday (years).	Sick and accident benefits paid.		Death benefits.
		Amount per week.	Number of weeks.	
5.....	4 to 35	\$1.25	10	\$14.00
5.....	36 to 45	1.00	10	12.50
5.....	46 to 60	1.00	10	10.00
10.....	8 to 35	2.50	10	28.00
10.....	36 to 45	2.25	10	25.00
10.....	46 to 60	2.00	10	20.00
15.....	12 to 35	3.75	10	40.00
15.....	36 to 45	3.25	10	35.00
15.....	46 to 50	3.00	10	30.00
20.....	15 to 35	5.00	10	52.00
20.....	36 to 45	4.50	10	45.00
20.....	46 to 50	4.00	10	40.00
25.....	18 to 35	6.00	10	70.00
25.....	36 to 45	6.00	10	60.00
25.....	46 to 50	5.00	10	50.00
30.....	20 to 35	7.00	10	80.00
30.....	36 to 40	6.50	10	75.00
30.....	41 to 45	6.00	10	60.00

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 14 FOR ALL AGES.

Weekly premium (cents).	Sick and accident benefits paid.		Death benefit.
	Amount per week.	Number of weeks.	
5.....	\$1.50	(a)	\$15.00
10.....	3.25	(a)	35.00
15.....	4.00	(a)	45.00
20.....	4.75	(a)	55.00
25.....	5.25	(a)	65.00

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 15.

Weekly premium (cents).	Age at next birthday (years).	Sick and accident benefits paid.		Death benefit.
		Amount per week.	Number of weeks.	
5.....	2 to 9	\$1.25	10	\$12.00
5.....	10 to 39	1.50	10	15.00
5.....	40 to 49	1.25	10	12.00
5.....	50 to 59	.71	10	8.00
10.....	2 to 9	2.50	10	25.00
10.....	10 to 39	3.00	10	30.00
10.....	40 to 49	2.50	10	25.00
10.....	50 to 59	1.50	10	15.00
15.....	2 to 9	3.75	10	37.00
15.....	10 to 39	4.50	10	45.00
15.....	40 to 49	3.75	10	37.00
15.....	50 to 59	2.25	10	23.00

SCHEDULE OF PREMIUMS AND BENEFITS OF COMPANY NO. 16.

5.....	1 to 40	\$1.25	(b)	\$20.00
5.....	41 to 50	1.00	(b)	12.50
5.....	51 to 60	.75	(b)	10.00
10.....	1 to 40	2.50	(b)	40.00
10.....	41 to 50	2.00	(b)	25.00
10.....	51 to 60	1.50	(b)	20.00
15.....	15 to 40	3.75	(b)	45.00
15.....	41 to 50	3.00	(b)	37.50
15.....	51 to 60	2.25	(b)	30.00
20.....	18 to 40	5.00	(b)	60.00
20.....	41 to 50	4.00	(b)	50.00
20.....	51 to 60	3.00	(b)	40.00
25.....	18 to 40	6.00	(b)	75.00
25.....	41 to 50	5.00	(b)	60.00
25.....	51 to 60	3.75	(b)	45.00

a Five weekly benefits guaranteed, followed by half benefits unless permanently disabled.
b Four weekly benefits guaranteed, followed by half benefits unless permanently disabled.

A cursory examination of the foregoing tables shows that the cost of industrial combination insurance is by no means a fixt quantity. How greatly the cost in one company differs from that in another may be learned from the two tables which immediately follow. In the first of these tables is a parallel statement of the maximum amounts of sick and accident benefits guaranteed in any one year by the several companies at certain ages for a weekly premium of 5 cents. The table also shows the number of weekly indemnities for which each company is liable.

NUMBER AND TOTAL AMOUNT OF WEEKLY SICK AND ACCIDENT BENEFITS PAID IN ANY ONE YEAR FOR A WEEKLY PREMIUM OF 5 CENTS, BY THE ASSESSMENT INDUSTRIAL COMPANIES ISSUING COMBINATION POLICIES.

Company.	Number of weekly benefits paid.	Total benefits paid in any one year on policy issued at—								
		20 years.	25 years.	30 years.	35 years.	40 years.	45 years.	50 years.	55 years.	60 years.
Company No. 6...	^a 12	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$12.00	\$12.00	\$9.00	\$9.00
Company No. 7...	10	12.50	12.50	12.50	12.50	12.50	10.00	10.00	7.50	7.50
Company No. 8...	10	12.50	12.50	12.50	12.50	12.50	10.00	7.50	5.00	5.00
Company No. 9...	^b 10	12.50	12.50	12.50	12.50	12.50	10.00	10.00	-----	-----
Company No. 10...	^a 12	15.00	15.00	15.00	15.00	15.00	12.00	12.00	9.00	-----
Company No. 11...	10	12.50	12.50	12.50	12.50	12.50	10.00	10.00	7.50	-----
Company No. 13...	10	12.50	12.50	12.50	12.50	10.00	10.00	10.00	10.00	10.00
Company No. 14...	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)	(<i>c</i>)
Company No. 15...	10	15.00	15.00	15.00	15.00	12.50	12.50	7.10	7.10	-----
Company No. 16...	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)	(<i>d</i>)
Company No. 17...	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)	(<i>e</i>)

^a Seven weekly benefits allowed for accident.
^b Five weekly benefits allowed for accident.
^c Five weekly benefits of \$1.50 each guaranteed, followed by half benefits unless disability is pronounced permanent.
^d Four weekly benefits of \$1.25 each guaranteed, followed by half benefits unless pronounced incurable by the company's physician.
^e Number of weekly benefits not specified in the contracts, but left to discretion of the company.

The next table compares in like manner the funeral or death benefits guaranteed in the policies of the several assessment industrial companies for the weekly premium of 5 cents. As a rule the death benefit is equal to the weekly sick benefit multiplied by the maximum number of benefits guaranteed, but the rule does not always hold good. It is a custom among these companies to keep the maximum sick and accident liability about equal to the death benefit, and, as will be seen later, the latter liability is frequently substituted for the former.

DEATH BENEFIT PAID FOR A WEEKLY PREMIUM OF 5 CENTS BY THE VARIOUS ASSESSMENT INDUSTRIAL COMPANIES ON COMBINATION POLICIES.

Company.	Age at issue.								
	20 years.	25 years.	30 years.	35 years.	40 years.	45 years.	50 years.	55 years.	60 years.
Company No. 6.....	\$12. 50	\$12. 50	\$12. 50	\$12. 50	\$12. 50	\$10. 00	\$10. 00	\$7. 50	\$7. 50
Company No. 7.....	12. 50	12. 50	12. 50	12. 50	12. 50	10. 00	10. 00	7. 50	7. 50
Company No. 8.....	12. 50	12. 50	12. 50	12. 50	12. 50	10. 00	7. 50	7. 50	5. 00
Company No. 9.....	12. 50	12. 50	12. 50	12. 50	12. 50	10. 00	10. 00	-----	-----
Company No. 10.....	12. 50	12. 50	12. 50	12. 50	12. 50	10. 00	10. 00	7. 50	-----
Company No. 11.....	12. 50	12. 50	12. 50	12. 50	12. 50	10. 00	10. 00	7. 50	-----
Company No. 13.....	14. 00	14. 00	14. 00	14. 00	12. 50	12. 50	10. 00	10. 00	10. 00
Company No. 14.....	15. 00	15. 00	15. 00	15. 00	15. 00	15. 00	15. 00	15. 00	15. 00
Company No. 15.....	15. 00	15. 00	15. 00	15. 00	12. 00	12. 00	8. 00	8. 00	-----
Company No. 16.....	20. 00	20. 00	20. 00	20. 00	20. 00	12. 50	12. 50	10. 00	10. 00
Per cent of highest above lowest.....	60	60	60	60	67	50	100	100	200

The two preceding tables enable us to institute comparisons between the charges made by the several assessment companies which sell combination insurance on the industrial plan, and they show that the price varies in a remarkable manner. For the same premium the total sick and accident benefits allowed in one company are sometimes twice and the death benefits three times what they are in another.

It is interesting to compare the cost of combination insurance when paid for in weekly payments with its cost when paid for in the ordinary way. Fortunately a comparison of this kind can be made without entering the domain of theory, for it happens that there is in the District a company doing a large regular business which sells for an annual premium a policy carrying sick, accident, and death benefits. The cost of a policy of this kind is here given:

COST OF COMBINATION (SICK, ACCIDENT, AND LIFE) INSURANCE IN A REGULAR COMPANY WITH PREMIUM PAID IN ONE ANNUAL PAYMENT.

Age (years).	Yearly premium.	Maximum accident benefit (\$5 weekly for 200 weeks).	Maximum sick benefit (\$5 weekly for 26 weeks).	Death benefit.
20.....	\$24. 37	\$1,000	\$130	\$1,000
25.....	26. 21	1,000	130	1,000
30.....	28. 60	1,000	130	1,000
35.....	31. 70	1,000	130	1,000
40.....	35. 79	1,000	130	1,000
45.....	41. 32	1,000	130	1,000
50.....	48. 89	1,000	130	1,000
55.....	59. 31	1,000	130	1,000
60.....	73. 79	1,000	130	1,000

With the above schedule and the tables on page 800 before us, we may make the comparison here desired. In the table following will be found the result of the comparison. The first part of the table compares the amount of accident protection purchasable on the assessment industrial plan for each \$1 of premium expenditure with the amount purchasable on the ordinary plan for the same premium expenditure; the second part compares in a similar way the sick benefits guaranteed by the assessment industrial policy with those guaranteed by the ordinary policy; the third compares the death benefits of the two kinds of policies. In interpreting the table it should be remembered that each element of protection compared is only one of the three things guaranteed in both classes of policies, to wit, insurance against accident, insurance against sickness, and insurance against death. In qualification of the figures of this table it should be said that the benefits guaranteed under a policy in the assessment industrial company are largely reduced by many terms and conditions which do not appear in the policies of the ordinary insurance company. These conditions are fully set forth on page 807 et seq.

ACCIDENT BENEFITS (MAXIMUM) GUARANTEED FOR EACH \$1 OF PREMIUM ON COMBINATION POLICIES BY ASSESSMENT INDUSTRIAL COMPANIES AND BY AN ORDINARY COMPANY.

Age (years).	Accident benefits (maximum) guaranteed per \$1 of premium.		
	Industrial (average of 10 com- panies).	Ordinary.	Per cent of excess of ordinary over industrial.
20.....	\$3.89	\$41.03	955
25.....	3.89	38.15	881
30.....	3.89	34.97	799
35.....	3.89	31.55	711
40.....	3.70	27.94	655
45.....	3.19	24.20	659
50.....	2.89	20.45	608
55.....	2.59	16.86	551
60.....	2.45	13.55	453

SICK BENEFITS (MAXIMUM) GUARANTEED FOR EACH \$1 OF PREMIUM ON COMBINATION POLICIES BY ASSESSMENT INDUSTRIAL COMPANIES AND BY AN ORDINARY COMPANY.

Age (years).	Sick benefits (maximum) guaranteed per \$1 of premium.		
	Industrial (average of 10 com- panies).	Ordinary.	Per cent of excess of ordinary over industrial.
20.....	\$4.62	\$5.33	15
25.....	4.62	4.96	7
30.....	4.62	4.54	^a 2
35.....	4.62	4.10	^a 13
40.....	4.42	3.63	^a 22
45.....	3.77	3.15	^a 20
50.....	3.47	2.66	^a 30
55.....	2.80	2.19	^a 28
60.....	2.69	1.76	^a 53

^a Excess is in favor of industrial insurance.

DEATH BENEFITS GUARANTEED FOR EACH \$1 OF PREMIUM ON COMBINATION POLICIES BY ASSESSMENT INDUSTRIAL COMPANIES AND BY AN ORDINARY COMPANY.

Age (years).	Death benefits guaranteed per \$1 of premium.		
	Industrial (average of 10 com- panies).	Ordinary.	Per cent of excess of ordinary over industrial.
20.....	\$5.35	\$41.03	667
25.....	5.35	38.15	611
30.....	5.35	34.97	554
35.....	5.35	31.55	490
40.....	5.17	27.94	440
45.....	4.31	24.20	461
50.....	3.96	20.45	416
55.....	3.44	16.86	390
60.....	3.53	13.55	284

The foregoing table shows the widest difference between the prices of industrial and ordinary insurance yet discovered. As between the accident indemnity furnished by the assessment industrial companies and that furnished by the ordinary company there can hardly be said

to be any comparison, for the accident indemnity of the ordinary policy exceeds that of the assessment industrial policy by many hundred per cent. In the matter of sick indemnity the price seems to be slightly in favor of the industrial companies, altho the modifications, which are found in the assessment industrial policies and which will be stated below, would bring the guarantees far below the figures given in the table. Again the life insurance of the ordinary policy is several hundred per cent greater than the death benefit of the assessment industrial policy. When we observe the facts contained in the table in their entirety, remembering that the indemnities provided by both the assessment industrial and the ordinary policies constitute a triple guarantee, we are forced to the conclusion that the small-payment method of buying combination insurance is inordinately costly when compared with the large-payment method.

MONTHLY ASSESSMENT ASSOCIATIONS.

Two of the assessment companies sell combination insurance for premiums payable monthly. One of these does monthly assessment business only, while the other carries on both a weekly and monthly premium business. The rates of these companies are here given:

SCHEDULE OF PREMIUMS AND BENEFITS ON MONTHLY ASSESSMENT PLAN,
COMPANY NO. 12.

Age (years).	Entrance fee.	Monthly premium.	Sick and accident benefits per week.	Death benefit.
6 to 15.....	\$2.00	\$0.65	\$2.50	\$50.00
15 to 20.....	4.00	1.25	6.00	100.00
20 to 30.....	4.00	1.25	8.00	100.00
30 to 40.....	4.00	1.25	7.00	100.00
40 to 50.....	4.00	1.25	6.00	100.00
50 to 60.....	2.00	.65	2.50	50.00

SCHEDULE OF PREMIUMS AND BENEFITS ON MONTHLY ASSESSMENT PLAN,
COMPANY NO. 13.

15 to 35.....	\$3.00	\$0.25	\$1.50	\$25.00
36 to 45.....	3.00	.25	1.50	20.00
46 to 55.....	3.00	.25	1.25	20.00
15 to 35.....	3.00	.40	2.40	40.00
36 to 45.....	3.00	.40	2.40	32.00
46 to 55.....	3.00	.40	2.00	32.00
15 to 35.....	3.00	.50	3.00	50.00
36 to 45.....	3.00	.50	3.00	40.00
46 to 55.....	3.00	.50	2.50	40.00
15 to 35.....	3.00	.60	3.60	60.00
36 to 45.....	3.00	.60	3.60	48.00
46 to 55.....	3.00	.60	3.00	48.00
15 to 35.....	3.00	.75	4.50	75.00
36 to 45.....	3.00	.75	4.00	60.00
46 to 50.....	3.00	.75	3.50	60.00
15 to 35.....	3.00	1.00	6.00	100.00
36 to 45.....	3.00	1.00	5.50	80.00
46 to 50.....	3.00	1.00	5.00	80.00
15 to 35.....	3.00	1.25	7.00	125.00
36 to 45.....	3.00	1.25	7.00	100.00
46 to 50.....	3.00	1.25	6.00	85.00

The foregoing rates tell their own story. They can not be compared with the rates of other companies, for there are no other companies in the District which sell precisely the same kind of insurance payable in monthly premiums. A comparison of the rates of one of the companies with the rates of the other shows that the charges in both cases are practically the same.

COST OF WHOLE-LIFE INSURANCE IN ASSESSMENT COMPANIES.

Several of the assessment industrial companies sell simple whole-life as well as combination insurance. The whole-life business of these assessment companies is, with one unimportant exception, conducted on the industrial plan, and the life rates offered by these companies follow as a rule very closely those offered by the regular industrial companies. A comprehensive account of the industrial life rates of the assessment companies would, therefore, be only a repetition of previous statements. In the schedules of several of the assessment industrial companies, however, the rates for straight-life insurance show a departure from the charges of the regular industrial companies, and these schedules must receive attention.

One assessment company offers the following schedule of rates for straight-life insurance:

PREMIUM RATES CHARGED FOR STRAIGHT-LIFE INSURANCE BY AN ASSESSMENT INDUSTRIAL COMPANY.

Age at next birthday (years).	Weekly premium (cents).	Amount of insurance. (a)
10 to 15.....	10	\$100
16 to 20.....	10	90
21 to 25.....	10	80
26 to 30.....	10	70
31 to 35.....	10	60
36 to 40.....	10	55
41 to 45.....	10	50
46 to 50.....	10	45
51 to 55.....	10	40

^a For each five-year period that the policy is kept continuously in force, not exceeding 25 years, one-fifth the original mortuary value is added.

The relative cost of a policy of this kind in comparison with a similar policy issued by a regular industrial company is conveniently shown in the table below. In the second column are the successive death benefits guaranteed on a policy at each five-year period when issued by an assessment industrial company at the age of 20 (at next birthday), the weekly premium being 10 cents. In the third column is the mortuary value at each five-year period usually assured by a regular industrial company, the age being 20 (at next birthday), and the premium being 10 cents. In qualification of these figures it should be said that the mortuary value of a policy in an assessment industrial company is largely reduced by many terms and conditions which do not appear in the policies of the regular industrial companies. These conditions are fully set forth on page 807 et seq.

DEATH BENEFITS GUARANTEED AT EACH FIVE-YEAR PERIOD BY AN ASSESSMENT INDUSTRIAL COMPANY AND BY A REGULAR INDUSTRIAL COMPANY ON A POLICY ISSUED AT AGE 20 (AT NEXT BIRTHDAY) FOR A WEEKLY PREMIUM OF 10 CENTS.

Attained age of insured, policy having been issued at age 20 (at next birthday).	Death benefits guaranteed at specified age for a weekly premium of 10 cents.		
	Assessment industrial company. (a)	Regular industrial company.	Per cent of excess of regular over assessment.
20 years.....	^b \$90	^b \$174	93
25 years.....	103	174	61
30 years.....	126	174	38
35 years.....	144	174	21
40 years.....	162	174	7
45 years and over.....	180	174	^c 4

^a The mortuary value of a policy in an assessment industrial company is largely reduced by many terms and conditions which do not appear in the policies of the regular industrial companies. These conditions are fully set forth on page 807 et seq.

^b The policy reaches the full value given only when premiums have been paid for a full year.

^c Excess in favor of assessment policy.

The above table shows that this particular assessment industrial policy is a very ingenious affair. The person insured in the assessment company has after the age of 45, \$6 more of insurance than he would have received in the regular industrial company. In the meantime, taking into consideration the amount of protection he has had and taking the charges of the regular industrial company as a basis for calculation, he has paid for this insurance premiums in excess of what the same amount of protection would have cost in a regular industrial company as follows:

Excess premiums paid—

First five years	\$12. 55
Second five years	9. 90
Third five years.....	7. 20
Fourth five years	4. 50
Fifth five years.....	1. 80
Total.....	35. 95

Another assessment industrial company offers for a weekly premium of 5 cents insurance as shown in the second column of the table following. The third column gives the amount of insurance usually guaranteed for a weekly premium of 5 cents by the regular industrial companies. The per cent of difference between the amounts is also shown, and it will be observed that the regular industrial company gives a much greater insurance for the same premium—5 cents per week.

DEATH BENEFITS GUARANTEED BY AN ASSESSMENT INDUSTRIAL COMPANY AND BY A REGULAR INDUSTRIAL COMPANY FOR A WEEKLY PREMIUM OF 5 CENTS.

Age at next birthday (years).	Death benefits guaranteed for a weekly premium of 5 cents.		
	Assessment industrial company.	Regular industrial company.	Per cent of excess of regular over assessment
15.....	\$94	\$103	10
20.....	78	87	12
25.....	66	76	15
30.....	57	67	18
35.....	49	59	20
40.....	40	50	25
45.....	32	42	31
50.....	25	35	40
55.....	18	28	56
60.....	12	22	83

A third assessment industrial company offers a whole-life policy that is worthy of special notice. It will be remembered that the regular industrial companies pay only one-fourth of the insurance if the insured dies within six months of the date of the issue of the policy and only one-half if death occurs after six months and within one year from the date of the issue of the policy. Now the assessment company in question offers a whole-life policy on precisely these terms and at the same rates charged by the regular industrial companies. But it also issues a special whole-life policy that does not contain the conditions referred to above but is in full force as soon as it is executed. For this advantageous feature exactly 100 per cent is added to the premium, while nothing is added to the face of the policy. The rates of this policy and its conditions are given below just as they are advertised:

DEATH BENEFITS GUARANTEED FOR A WEEKLY PREMIUM OF 10 CENTS BY AN ASSESSMENT INDUSTRIAL COMPANY.

[Under this policy the full amount of the insurance is in force from the payment of the first premium and the delivery of the policy.]

Age at next birthday (years).	Amount of death benefit.	Age at next birthday (years).	Amount of death benefit.	Age at next birthday (years).	Amount of death benefit.
10.....	\$120	31.....	\$66	52.....	\$32
11.....	118	32.....	64	53.....	31
12.....	116	33.....	62	54.....	30
13.....	112	34.....	60	55.....	28
14.....	108	35.....	59	56.....	27
15.....	103	36.....	57	57.....	26
16.....	100	37.....	55	58.....	25
17.....	94	38.....	54	59.....	23
18.....	92	39.....	52	60.....	22
19.....	89	40.....	50	61.....	21
20.....	87	41.....	49	62.....	20
21.....	84	42.....	47	63.....	19
22.....	82	43.....	45	64.....	18
23.....	80	44.....	44	65.....	17
24.....	78	45.....	42	66.....	16
25.....	76	46.....	41	67.....	15
26.....	74	47.....	39	68.....	14
27.....	72	48.....	38	69.....	13
28.....	71	49.....	37	70.....	12
29.....	69	50.....	35		
30.....	67	51.....	34		

"Policies written up to \$500 on the above table and insure for the full amount when delivered. Policy from date of issue is incontestable and absolutely free of conditions as to residence, occupation, or travel, and payable one hour after death."

The above rates are 100 per cent higher than the regular industrial rates, and 300 per cent higher than the ordinary rates in regular companies.

TERMS AND CONDITIONS OF COMBINATION ASSESSMENT POLICIES.

The schedules of rates of themselves will not give a correct idea of the cost of insurance which the assessment industrial companies sell. To gain a clear notion of that cost the policies of the company must be carefully examined. Such an examination will now be undertaken, but first it will be best to present the exact text of a typical combination policy issued by one of the assessment industrial associations in the District:

FORM OF COMBINATION POLICY CONTRACT ISSUED BY AN ASSESSMENT INDUSTRIAL ASSOCIATION.

[Name of company.]

No. ———.

Age 20.

By this Certificate of Membership,

In consideration of the statements and agreements made in the application for this certificate of membership, which application is hereby made a part of this contract and in further consideration of the payment of the sum of fifteen cents on the date hereof and the payment of a like sum on Monday of each week hereafter, promises to pay to ———, of Washington, D. C., four and 50/100 dollars per week, upon satisfactory proof of disability, thru sickness or accident, in accordance with the terms and conditions as provided herein, from giving any attention to or superintending in any manner the duties usually performed, or any other business or occupation (the proof of which shall consist of the attending physician's certificate, approved by the medical director of the association, or some officer thereof, and which shall be furnished weekly by the member during the continuance of the disability). On each anniversary of this certificate (after the first) five of the weekly premiums paid hereon shall be added annually to the amount of the death benefit, and will be payable at the death of the member named herein, provided this certificate be kept in full force from date of issue.

In the event of the death of the insured the said association, as provided by the terms herein, will pay to ———, wife, forty-five dollars.

In witness whereof, the said association, at its office, in Washington, D. C., has, by its president and secretary, signed and sealed this certificate subject to the by-laws, rules, and regulations, and terms and conditions as printed on the back of this certificate, which are hereby made a part of this contract, in the same manner and to the same extent as if printed in the body hereof, but the same shall not be binding on the said association prior to the date hereof, or unless the member is alive and in good health on the date of its delivery, or on the date when the first payment is made known. Note article 21 of certificate.

Dated this 22d day of August, one thousand nine hundred and 4.

_____, *President.*

_____, *Secretary.*

Countersigned by

_____, *General Manager.*

[SEAL.]

Terms and conditions upon which the within certificate is issued.^(a)

1. All dues or other moneys are payable by the members direct to the association at its principal office, Washington, D. C., or such branch offices as may be established, and the collection of the same elsewhere, from time to time, by the collector of the association, shall be deemed and taken to be a mere courtesy and convenience to the member and shall not be construed as establishing any custom whatever, or as relieving any member from the duty of paying the same to the association at the nearest office, as aforesaid. Should any collector of the association neglect or fail at any time to collect from any member any dues or other moneys when due to the association, it shall be the duty of the member to pay the same at the nearest office of the association, within the time allowed for the payment thereof, whether the association be indebted to him or her on account of disability or not, and in the event of their failing to do so they shall forfeit their membership in the association, and their certificate of membership shall become null and void, and all dues and other moneys paid by the member shall be absolutely forfeited, to vest exclusively in the association, and the member shall not be entitled to any benefits until five weeks after he has furnished the health certificate and made payment of all arrearages in dues and other moneys as specified herein.

2. The association shall have the right and power to refuse to reinstate any member or to restore any certificate of membership forfeited for any just cause, and such refusal shall be final and conclusive.

3. Should the member fail to pay the weekly dues upon this certificate for three or more Mondays this certificate shall be void and all payments made hereunder shall be forfeited, and such member will not be entitled to any benefits for sickness, accident, or death, but such member can be reinstated, if in good health by paying up in full all arrearages in dues and other moneys and furnishing a health certificate from the association's medical examiner, but such member may be reinstated by the association without a medical examination, if it so desires, but such member shall not be entitled to benefits should sickness, accident, or death occur within five weeks after date of reinstatement, nor after that for any sickness or accident having had its beginning during said five weeks, nor for death resulting from sickness or accident commencing or occurring during said five weeks, but such members upon the surrender of their receipt book and this certificate for cancellation, shall be entitled to the return of all premiums paid since the beginning of said five weeks.

4. Members in arrears for three or more Mondays by passing a medical examination satisfactory to the association, if required, may make partial payments of their arrearages to the association or its agent, but no liability upon the part of the association shall exist in favor of any member who has been three Mondays in arrears by reason of acceptance of such partial payments until five weeks after the payment of all arrearages in full, nor for any sickness or accident having had its beginning during said five weeks nor for death resulting from the same other than the return of dues paid within said five weeks as provided in section 3 hereof.

5. Should any delinquent member not in good health and free from all ailments and complaints, or any person on his or her behalf, pay to the association, or any officer, collector or employee thereof, any dues or other moneys in arrears, the same shall be returned to such member, and such payment shall not reinstate or restore to membership such delinquent, but his or her membership shall be and continue to be forfeited, and his or her certificate shall be and continue to be null and void.

6. The dues on this certificate are due on Monday of each week, beginning with the date hereof, and any payment not made on Monday is in arrears after that date. No payment of dues made on this certificate will be recognized by the association as valid or binding unless made to a duly authorized agent, and by such agent entered at the time of payment in the receipt book belonging with this certificate.

^a These terms and conditions are printed in type very small and very hard to read.

7. And it is further agreed that if within the period of one year from the date benefits attach as aforesaid, the insured shall have any sickness, disability or accident, for which benefits would be payable, and a qualified physician in good standing shall certify such sickness, disability or accident to be permanent and probably incurable, and the medical examiner or any other officer designated by the association approve the same, an amount equal to one-half the funeral benefit named in this certificate will be payable; and if such sickness, disability, or accident should occur after one year from the date said benefits attach the full amount of the funeral benefit will be payable, and in either event, upon such payment or the tender thereof, this certificate shall cease and be surrendered to the association. In no event shall more than an amount equal to 52 weekly benefits (in the aggregate) be paid under this certificate.

8. The age of the person insured in this certificate shall be admitted on due proof, but if not so proven, the amount of sick or death benefit payable under this certificate shall in no case be more than the weekly payment charged would have purchased in this association for such person at their true age.

9. This certificate and the receipt book containing the entries of assessments paid on the same, shall be exhibited to the officers or authorized employees of the association, at any time upon demand; and when notifying the association of disability under this certificate, the receipt book must accompany said notice.

10. The disappearance or long-continued absence of the member shall not be regarded as evidence of death, but satisfactory proof of the fact and cause of death must be furnished the association, before death benefit can be claimed.

11. Beneficiaries must have something more than a pecuniary interest in the insured, as speculative policies are not issued by this association.

12. Members who hold a sick and accident certificate and whose premiums are not in arrears will be entitled to benefits, if by sickness or accident they shall be totally disabled from attending to their usual occupation or other kind of employment; said member must be strictly confined to bed at his place of abode with some well-defined disease or accident and attended there by a duly licensed physician sufficiently often to answer intelligently and in full all questions appearing in such blanks as may be furnished by the association, otherwise no benefits will be paid. Forms for member's and physician's weekly reports will be furnished on demand, and all questions therein must be answered in full to the satisfaction of the association.

13. Failure to furnish reports weekly on blanks furnished by the association will invalidate any claim, viz: First report must be furnished seven days from date notice was received by the association, and second report seven days from that and so continued thruout illness, whether or not payment has been made for the preceding week.

14. In order to properly adjust any claim the association may require the member or beneficiary at any time to furnish an affidavit, and also to furnish an affidavit from the attending physician at any time and as often as may be deemed necessary, and their failure to do so within seven days will invalidate their claim.

15. When a member becomes disabled thru sickness or accident, he or she shall at once write to the association and his or her claim will go into effect from the date notice is received by the association at its principal office, provided said member, at the time, is attended at his or her residence by a duly registered physician. Failure to notify the association of sickness or accident within ten days will invalidate the claim. The member shall also submit to a medical examination, if deemed necessary, by the association's own physician.

16. All benefits will be computed from the date of the physician's first visit to the member to the date of his last visit, provided always that written notice of disability has been received from said member by the association on or before the date of the physician's first visit to the member, otherwise all benefits will be computed from the date notice is received from said member until date of physician's last visit to said member, but in no case will benefits be paid for less than seven days' disability. In case

of sickness or death caused by pulmonary or heart disease, consumption, phthisis, or paralysis, only one-half of the amount otherwise due will be paid.

17. It is hereby agreed that only one-fourth of the maximum benefits specified herein shall be paid for any sickness, accident, or death occurring previous to the first twenty-six weeks from date of this certificate, or for any sickness or accident having had its beginning during said twenty-six weeks, or for death caused by any sickness or accident having had its beginning during said twenty-six weeks from date of certificate of membership. After twenty-six weeks from date of this certificate the full weekly sick and accident benefit will be paid, and after one year from the date of this certificate the entire death benefit will be paid, but in no case can a member and his heirs or personal representatives draw more than an amount equal to ten weekly benefits in any one year, nor more than five weekly benefits for sickness or accident in any one six months.

18. It is further agreed that one-fourth and one-half weekly benefits paid under this certificate shall be construed to mean full weekly benefits in computing the number of weekly benefits payable during the first twelve months of membership.

19. No collector or employee of the association has authority to alter or discharge contracts or waive forfeiture. The application of every member shall form a part of the contract between the member and the association, and if any statement contained therein, by whomsoever made or written, shall be untrue in any respect, then the membership and the certificate of membership of any such member shall be null and void, and all moneys paid on account of same shall be absolutely forfeited to the association. Sick benefits will not be paid for illness arising from any of the following diseases, their consequence or sequel: Rheumatism, neuralgia, lumbago, sciatica, venereal diseases, confinement, chronic diseases, intemperance, or diseases peculiar only to women.

20. No suit or action at law, or in equity, shall be maintained to enforce the performance of this contract until sixty days after the filing, in the principal office of the association of any claims against the same of any description, nor unless such suit or action shall be commenced within six months after the beginning of any disability for which benefits are claimed, or if for death benefits, within six months after the decease of the person insured under this certificate, and it is expressly agreed that should any such suit or action be commenced after the expiration of said six months the lapse of time shall be deemed as conclusive evidence against the validity of such claim, any statute of limitations to the contrary, notwithstanding. The production of the certificate and premium receipt book, or a receipt from the claimant shall be a full release and discharge to the association and its officers.

21. The board of trustees shall have the power to levy extra assessments when needed, or raise the rate if necessary.

22. It is hereby stipulated and agreed that in case the member holding this certificate dies by the hand of justice, or is killed in a fight or brawl, or becomes disabled, hurt or sick, thru or by reason of intoxication, or any fight or brawl, thru the violation of any law, or shall come to death by his or her own hand, sane or insane, or be confined with any disease or ailment, chronic or otherwise, contracted before joining the association, or when sickness or accident is caused by being injured while in active service in the Regular Army or Militia, the association shall not be required or liable to pay anything whatever to such member, or any person, for or on account of same.

23. No additional certificate will be allowed or considered binding on the association (unless so indorsed at the time of their issue). If any additional certificates are issued or taken out by the within named, or thru his or her sanction was taken out by some other person without being indorsed additional, such certificates will be declared null and void by the association, and no benefits will be payable except on the first certificate that was issued to the member.

Some of the conditions found in the above policy are not common to all the policies. For example, the provision for an increase in the death benefit after a certain time is found in the policies of but two other companies. Generally speaking, however, the policy printed above very well exemplifies the nature of the terms and conditions which are found in assessment industrial policies and which will now be examined in detail.

CONDITIONS OF BENEFIT PAYMENT DURING FIRST YEAR.

In none of the sick, accident, or death benefit policies do the full benefits accrue during the first year. The conditions in respect to first-year benefits can be learned from the following extracts taken from the policies of leading assessment industrial companies:

1. And it is agreed furthermore that only one-half of the benefits specified above shall be paid for any sickness occurring after the first ten weeks from date of this certificate [sic], or for any sickness having had its beginning after said ten weeks of membership, but in the case of disability or death during the first twenty weeks from date, the association reserves the right to return all premiums paid on this certificate and cancel the same. After twenty weeks from date of this certificate the full weekly sick and disability benefit and one-half the death benefit will be paid, and after one year from the date of this certificate the entire funeral benefits will be paid.

Provided, however, that one-half weekly benefits paid under this agreement shall be construed to mean full weekly benefits, in computing the number of the full weekly benefits payable during the first twelve months of membership.

2. That neither sick or accident benefits will be paid if sickness or accident occur before three months from the date of this certificate; if such sickness, disability or accident occur after three months and before six months from the date hereof one-fourth of the amount named as sick or accident benefits will be paid. If after six months and before twelve months, one-half, after twelve months the full amount.

3. If sickness, death or accident occur after a membership of ten weeks and before six months, one-fourth of said sum; after six months and before nine months, one-half; after nine months and before twelve months, three-fourths of said sum; after twelve months, the full amount of said sum.

The fact that practically no benefits accrue for a period ranging from ten to twenty weeks after the execution of the policy gives rise at times to a very singular insurance situation. A solicitor of industrial insurance frequently receives for his services all the premiums paid on a policy during the first fifteen or twenty weeks of its existence. Now it sometimes happens that a solicitor who is popular and well known in his neighborhood will solicit for three or four months for one company and then go over to another company. He then approaches his insurance clientele and asks them to let their

policies in one company lapse and to insure in his new company. Personal considerations actually lead many to do this. After collecting premiums for several months in company two the solicitor transfers his allegiance to company three, and again prevails upon his followers to change their policies. Thus by a series of skilful changes he collects the premiums and puts them in his pocket. In the meantime his policy holders are insured for nothing at all or for only one-fourth of the amount for which they pay.

CONDITIONS OF BENEFIT PAYMENT IN CASE OF CERTAIN DISEASES.

The sick and funeral benefits are by no means general indemnities against sickness and death. Some of the assessment industrial policies are liberal in respect to the cause of disability, but most of them name a long list of diseases for which only partial benefits and in other cases no benefits at all will be paid. Only the policies themselves can tell when benefits will and will not accrue, as will be seen from the following extracts from the policies of the various companies:

1. And provided further that in case of consumption, heart disease, rheumatism, sciatica or paralysis, only one-half the amount of sick benefits due under this contract will be payable for disability caused by such sickness. Provided further, that no more than seven [twelve for sickness] weeks' benefits shall be paid for any accidental injury sustained by the member.

2. Benefit will not be paid for sickness, caused by childbirth, diseases peculiar to females, venereal diseases or rheumatism in any form.

3. Only one-half of the sum otherwise due will be paid for death caused by consumption, phthisis, or heart disease or rheumatism occurring or having its beginning within one year from date of the policy.

4. In case of consumption, pulmonary diseases, heart disease, rheumatism, sciatica or paralysis only one-half the amount of sick or death benefits payable for disability or death caused by such diseases. Where disability is caused by accident not more than five weeks' benefits [ten weeks' sickness] will be paid.

5. No benefits will be paid for any chronic diseases which members contracted before joining the company. Benefits will not be paid for confinement, diseases peculiar to women or venereal diseases. For consumption, heart disease, rheumatism and paralysis one-half of sick benefit.

6. No sick benefits will be paid for confinement, diseases peculiar to women, venereal diseases, rheumatism, or any diseases contracted before joining this company and not reported in the application.

7. No benefits will be paid for disability caused by intoxication, violation of the laws of the land, venereal diseases, childbirth, disease of organs peculiar to females, rheumatism or death resulting from any of them.

8. In case of consumption, heart disease, or rheumatism occurring within eighteen months from date hereof, only one-half the amount

otherwise payable, will be payable for disability or death caused by such sickness.

9. Accident, sick or death benefits will not be paid in any case, when the accident, sickness or death results from venereal diseases, suicide, attempt to commit suicide, drunkenness, immorality, insanity, or while engaged in active military or naval service, nor for consumption within one year from date of application, nor for injury, sickness or death if caused by negligence or wilful act of applicant.

10. It is further understood and agreed that no benefit for sickness, accident or death will be paid in any case where the sickness, accidents, or death results from venereal diseases, suicide or attempt to commit suicide, old sores or ulcerated legs * * *. But it is hereby understood that in case the member be constantly sick or have a lingering disease, or have yellow fever, smallpox, or any contagious disease, the aforesaid benefits may be reduced at any time by the order of the president or board of directors.

11. In case of sickness or death caused by pulmonary or heart disease, consumption, phthisis, or paralysis, only one-half of the amount otherwise due will be paid.

Some of the above conditions have far-reaching effects upon the claims of policy holders. The naming of so many diseases for which benefits will not be paid in case of sickness or death relieves the company of one-sixth or more of its liabilities in some instances and to a corresponding degree reduces the value of their insurance to policy holders. For example, in one policy—see (4) preceding—sickness or death from consumption, pulmonary diseases, heart disease, rheumatism, sciatica, and paralysis are mentioned as diseases which will exclude full sick and death benefits. To what extent policy holders find their claims reduced by this clause may be learned from the report of the health officer of the District for 1903-4. In that report the number of deaths caused by the above-named diseases compared with the total number of deaths from all causes was stated as bearing the following proportions:

PER CENT OF DEATHS FROM CERTAIN DISEASES OF THE TOTAL NUMBER OF DEATHS FROM ALL CAUSES.

[From the report of the health officer of the District of Columbia for 1903-4.]

Cause of death.	Per cent of total deaths from all causes.
Consumption.....	13.055
Pneumonia.....	9.405
Heart disease.....	9.000
Rheumatism.....	.488
Paralysis.....	.724
Total.....	32.672

The foregoing figures show that nearly one-third of all deaths in the District of Columbia are from the excepted causes. Among the colored people, with whom the assessment industrial business is mostly

done, the percentage of deaths from consumption and pneumonia would be considerably higher, for the death rate from these particular causes among the colored people is more than double the rate among the whites. It is thus seen that more than one-third of the policies of this company and of several others are liable to be scaled down to one-half their face value by reason of the harsh conditions in reference to certain diseases. In one case—see (10) preceding—the conditions exempting the company from liability are so sweeping as to leave the policy holder practically no guarantee at all: “But it is hereby understood that in case the member be constantly sick or have a lingering disease, or have yellow fever, smallpox, or any contagious disease, the aforesaid benefits may be reduced at any time by the order of the president or board of directors.” No restriction whatever as to the amount of the reduction.

CONDITIONS OF ADMISSION.

Generally speaking admission into the assessment industrial association is easy. The following exhibit, compiled from official documents in the insurance department of the District, shows the facts in respect to conditions governing admission:

CONDITIONS GOVERNING ADMISSION TO THE ASSESSMENT INDUSTRIAL ASSOCIATIONS.

Company.	Entrance fee.	Age limit.	Is medical examination absolutely required.
Company No. 6.....	1 assessment ...	1 to 70 years.....	No.
Company No. 7.....	None.....	1 month to 70 years...	Yes.
Company No. 8.....	None.....	2 to 70 years.....	No.
Company No. 9.....	None.....	2 to 50 years.....	No.
Company No. 10.....	None.....	2 to 55 years.....	Yes.
Company No. 11.....	None.....	1 to 70 years.....	Yes. (a)
Company No. 12.....	\$2 to \$4.....	6 to 60 years.....	Yes.
Company No. 13.....	None.....	4 to 60 years.....	In some cases.
Company No. 14.....	1 assessment...	20 months to 70 years.	No.
Company No. 15.....	None.....	1 to 60 years.....	No.
Company No. 16.....	None.....	1 to 60 years.....	No.
Company No. 17.....	None.....	1 to 65 years.....	No.

a Or inspection.

According to the foregoing exhibit it may be broadly said that persons of any age may join the assessment industrial companies without cost and without medical examination. In three companies, however, a medical examination is required before issuing a policy. While most of the companies do not require a medical examination, nevertheless nearly all of them submit to a would-be policy holder an application blank to be filled out. The following is a specimen of such blanks:

FORM OF APPLICATION FOR INSURANCE IN AN ASSESSMENT INDUSTRIAL ASSOCIATION.

The [name of association], of Washington, D. C.

Application.

I hereby apply for a certificate of membership in the [name of association], of Washington, D. C., and promise and agree to make prompt payments of all assessments that may be levied upon me in accordance with this application, or failing to do so to relinquish all claims for benefits; and I agree that this application together with the conditions hereto annexed, and the certificate that shall issue from it, shall form the basis of contract between the society and myself.

Name Age next birthday years.
 Address Color
 Date of birth 190-. Are you married?
 Present state of health Occupation
 Date of last illness Duration
 Nature of last illness
 Name of medical attendant Address
 Have you ever had rheumatism? When?
 What was its nature? Duration?
 Have you ever had any accidental disabling injury? When?
 Its nature and result?
 Have you had any ulcers, tumors, or cancerous sores on the
 body?
 Are you ruptured?
 Has it ever disabled you from work or business?
 Have you ever been treated for diseases of the lungs, heart, kid-
 neys or bladder?
 Do you use intoxicating liquors? To what extent? ...
 State fully how many times in the last five years you have had any sickness or injury
 that disabled you from attending to business, and how long it lasted, and its nature

 Deaf and dumb, blind or insane persons will not be admitted.
 Name the person to whom the benefit in the event of your death shall be paid.
 Name How related to you

I hereby warrant the truthfulness of the answers to the above interrogatories, that I have not withheld any facts as to my age, health, habits, or history that might mislead the agent or society, and agree as such that they and the conditions annexed, shall constitute the authority upon which a certificate shall be issued. And I further agree that should the of so elect at any time after the expiration of one year from the date hereof, should I become permanently disabled by sickness or accident, it may pay to me the amount named herein as a death benefit in full discharge of all claims under the certificate and that thereupon the certificate shall be surrendered to the society for cancellation and the contract terminated.

Date, 190-. Applicant.

To be answered by agent.

Have you fully explained and does the applicant understand the conditions under which the certificate will be issued?

....., Agent.

NOTE.—Should the application be rejected, the money paid to the agent will be refunded.

Address

CONDITIONS RELATING TO TERMINATION OF POLICY.

In all the assessment industrial policies there is a provision giving the company the right to terminate the contract by the payment (in whole or in part) of the death benefit in case the holder becomes permanently disabled. A single extract from one of the policies will be sufficient to illustrate the "permanent disability" clause: "If within the period of one year from the date benefits attach as afore-said, the insured shall have any sickness, disability or accident for which benefit would be payable, and a qualified physician in good standing shall certify such sickness, disability or accident to be permanent and probably incurable, and the medical examiner or any other officer designated by the company approve the same, an amount equal to one-half the funeral benefit named in this certificate will be payable; and if such sickness, disability, or accident should occur after one year from the date said benefits attach, the full amount of the funeral benefit will be payable, and in either event, upon such payment or the tender thereof, this certificate shall cease and be surrendered to the company."

Under the foregoing provision, when it is seen that the sick policy holder is likely to remain sick for the full period during which sick benefits are payable and perhaps die in the end and render the company liable for death benefits in addition to the sick benefits that have been paid, the company puts an end to its risks by declaring the insured "probably incurable" and paying the death benefit at once. When compounding its liability in this way it is the custom of some of the companies to deduct from the sum due as a death benefit the sum of the sick benefits that have already been paid and give the policy holder the remainder. The right to proceed in this way is sometimes stipulated in the contract. Thus in one policy this clause is found, "should any member become incurable and disqualified (pronounced so by the company's physician) from following any and all business or vocation, the company reserves the right of paying to such a member a sum equivalent to the death benefits, deducting such fees as may have been paid for any and all sickness during that policy year in which the applicant was pronounced incurable, in which case all claims against the company shall stand canceled and the policy surrendered to the company and become null and void." In no case can a company lose by the presence of such a provision as this, and in the case of most of the companies it is cheaper to pay the death benefit than it is to pay the sick benefit for the full period for which benefits are allowed. In other words, the "probably incurable" clause permits the company to substitute a smaller for a greater liability and at the same time to wash its hands of a bad bargain.

The policies can of course also be terminated by failure to pay the premium. In most of the companies members who are in arrears may be reinstated: "Members in arrears for more than three assessments may be reinstated upon payment of back assessments in full, but will not be entitled to any benefits under the certificate unless in sound health and free from any disease at the time of such reinstatement, and in case death should occur for any cause whatever within five weeks from the date of such reinstatement the society shall not be liable to any extent whatever on account of such death."

The termination of the policy by lapse thru the nonpayment of premiums or otherwise relieves the company of all liability. There are no cash-surrender values or paid-up policy values in combination insurance: "If for any cause this certificate should become void all assessments paid on account thereof shall be forfeited to the company and all liability on the part of the society shall cease."

CONDITIONS AS TO THE COLLECTION OF PREMIUMS.

In all forms of industrial insurance it is the practise of the companies to collect the premiums at the home of the insured. The policies, however, do not provide for this convenient method of payment. The companies are under no obligation whatever to send a collector for the premiums. On the contrary, the policy holder is expressly obligated to pay the premiums at the office of the company. The provisions on this point are usually very explicit. The spirit of the condition in reference to place of payment may be learned in the following clause taken from a policy of an assessment industrial company: "That all assessments and dues are payable at the office of the association and the sending of a collector is only an act of courtesy on the part of the association, and the failure of the collector to call for dues will not be deemed an excuse for nonpayment as members can pay their dues at the office at any time during office hours." Sometimes the condition is more severe, as in the following: "In case for any reason the society shall not attend to the collection of assessments payable on their certificate thru its agent or collector it shall be the duty of the certificate holder within the time allowed by the society to bring or send said assessments to the home office or to the society's agent or collector, and in the event of the failure of the certificate holder to perform his duty the society may cancel this certificate without notice to any person or persons interested therein."

COST OF ASSESSMENT INDUSTRIAL INSURANCE AS AFFECTED BY
POLICY CONDITIONS.

It is plain that the numerous conditions with which the assessment industrial policies are weighted must be taken into account in considering the cost of insurance in the District. Nearly all the conditions that have been mentioned tend to make the cost of combination insurance higher than it appears to be as advertised in the rate schedules of the companies. The postponement of the full effect of the policy creates a period in which the policy holder is paying something for nothing or almost nothing; the conditions in respect to certain diseases reduce greatly the chances of getting the full policy value; the condition whereby the policy may be terminated by pronouncing the holder incurable is a one-sided bargain in which the insured is bound to be worsted; the condition in respect to place of payment of premium, contractually considered, takes the responsibility for the collection from the company where in industrial insurance it is supposed to rest, and places it upon the policy holder.

LAPSES OF ASSESSMENT INDUSTRIAL POLICIES.

It has been shown that among the buyers of industrial insurance from the regular companies the loss by lapses is very great. The assessment industrial business of the District shows even a greater percentage of loss thru this cause. Just how many lapses of combination policies occur in the District can not be told with absolute precision, yet a reliable estimate can be made.

According to the report of the Department of Insurance for the year ending December 31, 1903, during the year covered by the report seven of the assessment industrial companies sustained 2,637 losses and their combined money loss was \$13,313.31, or a loss of approximately \$5 on each policy settlement. Assuming this average of \$5 for each loss to have been correct as well for those companies which reported the amount but not the number of their losses, the \$37,691.27 reported as the total amount of losses for all assessment companies indicated a total of 7,538 losses. Subtracting the 7,538 policy settlements from the 40,783 policies which ceased to be in force during the year the number of lapses is found to be 33,245, or 78.9 per cent of the 42,142 policies written during the year.

The table below is given to show how short lived and unstable are the policies of the assessment companies:

NUMBER OF POLICIES OF THE ASSESSMENT INDUSTRIAL COMPANIES IN FORCE AT THE BEGINNING OF THE YEAR 1903, NUMBER WRITTEN DURING THE YEAR, NUMBER WHICH CEASED TO BE IN FORCE DURING THE YEAR, AND NUMBER IN FORCE AT THE END OF THE YEAR.

Company.	Policies in force Jan. 1, 1903.	Policies issued in 1903.	Policies ceased to be in force in 1903.	Policies in force Dec. 31, 1903.
Company No. 6.....	10,760	11,281	15,937	6,104
Company No. 7.....	3,338	7,577	5,614	5,301
Company No. 8.....	2,217	5,551	4,509	3,259
Company No. 9.....	1,832	4,467	3,503	2,796
Company No. 10.....	1,648	4,843	3,867	2,624
Company No. 11.....	1,321	4,005	3,221	2,105
Company No. 12.....	1,996	645	544	2,097
Company No. 13.....	2,492	719	1,114	2,097
Company No. 14.....	529	1,091	493	1,127
Company No. 15.....		824	212	612
Company No. 16.....	492	712	650	554
Company No. 17.....	937	427	1,119	245
Total.....	27,562	42,142	40,783	28,921

It would seem that in some instances the only business done is a lapse business. A company will begin a year with a certain number of policies in force. It will write a very large number of policies during the year, yet wind up the year's business with a smaller number than it had at the beginning. And what is true of a single company for a single year seems to be true for the whole District for as long a time as statistics are available. On the 1st of January, 1903, there were 27,562 assessment policies in force. During the year 42,142 new policies were issued, yet the year ended with 28,921 policies, a net gain of only 1,359 policies.

PREMIUMS AND LOSSES OF ASSESSMENT INDUSTRIAL COMPANIES.

The amount of insurance in force at the end of the year 1903 in the District in the several assessment industrial companies and the premiums collected and the losses paid to policy holders, or their beneficiaries, during the year are set forth below:

PREMIUMS RECEIVED AND LOSSES AND CLAIMS PAID DURING 1903, AND ADMITTED NET ASSETS AND INSURANCE IN FORCE DECEMBER 31, 1903, FOR THE ASSESSMENT INDUSTRIAL COMPANIES.

Company.	Premiums received during year.	Losses and claims paid during year.	Admitted net assets December 31, 1903.	Insurance in force December 31, 1903.
Company No. 6.....	\$41,777.47	\$10,272.39	\$8,287.15	\$143,207.50
Company No. 7.....	27,073.74	3,132.94	23,008.40	246,465.75
Company No. 8.....	17,696.20	3,447.90	59,034.67	129,722.00
Company No. 9.....	14,304.91	3,150.12	1,185.79	97,860.00
Company No. 10.....	12,404.48	2,898.24	2,584.97	102,787.50
Company No. 11.....	9,065.05	1,497.64	1,021.13	81,007.42
Company No. 12.....	24,087.70	10,866.00	27,767.10	182,400.00
Company No. 13.....	7,435.29	354.70	5,839.18	60,089.50
Company No. 14.....	2,833.76	932.30	7,918.68	61,416.00
Company No. 15.....	283.38	106.63	994.45	3,700.25
Company No. 16.....	2,666.80	1,032.41	9,878.52	15,365.00
Company No. 17.....	1,059.70		657.37	3,065.00
Total.....	160,693.48	37,691.27	148,777.41	1,127,035.92

The above exhibit throws a flood of light upon the subject in hand. One of the first things observable from the figures is the small amount of assurance per dollar of premium expenditure, \$7.01. Again, the ratio which the amount of losses paid bears to the premiums received reveals the high price of assessment industrial insurance. This ratio for the year 1903 was a little more than 23 per cent; or stated in another way, the assessment companies during that year collected from the policy holders \$4.26 for every dollar they gave back to them. In some of the companies the ratio of premium receipts to loss disbursements was much greater than 4 to 1. One large company it will be noticed collected nearly \$9 in premiums for every dollar returned to the policy holders, while another company collected more than \$20 in premiums for every dollar it paid out in losses.

OCCUPATIONS OF ASSESSMENT INDUSTRIAL POLICY HOLDERS.

The character of the occupations of those who buy combination insurance in the assessment industrial associations in the District is indicated in the subjoined table. In the preparation of this table the lists of beneficiaries which the companies are accustomed to publish were used. From these lists 500 identifications of adults were made and their occupations ascertained. In the work of identification all the published lists were exploited in the same manner and to the same extent.

OCCUPATIONS OF BENEFICIARIES OF 500 ASSESSMENT INDUSTRIAL CERTIFICATES.

Occupation.	Number.	Per cent.
Laborers.....	127	25.4
Domestics.....	122	24.4
Widows.....	57	11.4
Washerwomen.....	54	10.8
Teamsters.....	26	5.2
Porters.....	20	4.0
Waiters.....	12	2.4
Barbers.....	10	2.0
Keepers of eating houses.....	9	1.8
Cooks (male).....	8	1.6
Engineers.....	6	1.2
Nurses.....	6	1.2
Seamstresses.....	6	1.2
Coachmen.....	5	1.0
Clerks.....	4	.8
Blacksmiths.....	3	.6
Carpenters.....	3	.6
Hucksters.....	2	.4
Unclassified.....	20	4.0
Total.....	500	100.0

CONCLUSIONS AS TO THE COST OF COMMERCIAL INSURANCE IN THE DISTRICT.

The entire field of premium rates charged for the several kinds of insurance which are sold by the insurance companies of the District has now been surveyed.

The price of regular industrial insurance in all its forms has been seen to be very much higher than that of ordinary insurance. An analysis of the insurance business of the District of Columbia for 1903 furnishes some measure of the losses to the policy holders resulting from the purchase of life insurance on the weekly payment or industrial plan when compared with the cost of ordinary insurance. The rates of premium charged differ according to the form of the policy, but an examination of the several tables which have been given would seem to justify the statement that on an average the charge for regular industrial insurance is at least 75 per cent higher than that for ordinary insurance. If the amounts collected as premiums from the regular industrial policy holders (\$864,059.61) could have been paid in annual payments and could have purchased insurance at the rates charged by the ordinary companies, \$40,250,227 of protection would have been secured by the industrial policy holders instead of \$23,000,130, the amount actually secured under the industrial plan. This represents an apparent loss in insurance protection to the industrial policy holders of \$17,250,000, or, if it be measured in premium payments, an apparent loss of over \$370,000 upon the premium payments of the year.

With regard to assessment industrial insurance of the combination type, its cost is very high even when compared with the cost of ordinary insurance of the same kind, but on account of the complex nature of the subject it is not possible to determine exactly the amount of loss that is occasioned in the District by investments in combination industrial insurance. Reference to the table of premium rates previously given will afford a tolerably clear notion of the extent of that loss. It has been shown that the mortuary value of a combination policy of an ordinary company is fully 300 per cent greater than that of a similar policy in an assessment industrial company, the premium expenditure being the same. Applying this ratio to the insurance in force in the assessment industrial associations December 31, 1903, as already given, it appears that the premiums which purchased an assurance in those companies of a little more than \$1,125,000 were sufficient to purchase approximately \$4,500,000 of the same kind of assurance if they (the premiums) had been paid annually in an ordinary company. Here is an indicated loss in mortuary values of \$3,375,000. If the loss be measured by the premiums collected in excess of what would have been necessary to purchase the same amount of insurance in an ordinary company, this of course corresponds to the losses as indicated by the mortuary values, and as the premiums received during the year were \$160,693.48, it would seem that \$120,000 would be a fair estimate of the premium loss.

To sum up, then, the losses during the year 1903 in the District of Columbia resulting to the policy holders from the weekly payment or industrial plan of insurance, or the additional amount of insurance which might have been carried for the same premium payments if they could have been paid in yearly payments in ordinary companies, were in round numbers as follows:

Losses measured by amount of insurance carried—

(a). Regular industrial insurance.....	\$17, 250, 000
(b). Assessment industrial insurance.....	3, 375, 000
Total.....	20, 625, 000

Or, if the losses be measured in premium payments made during the year in excess of what would have been required to purchase the same amount of insurance if the premiums could have been paid in yearly payments in ordinary companies, they may be exprest as follows:

Losses measured by excessive premiums—

(a). Regular industrial insurance.....	\$370, 000
(b). Assessment industrial insurance.....	120, 000
Total.....	490, 000

Of course the facts set forth above tell nothing about the reasonableness or unreasonableness of the cost of either ordinary insurance or of industrial insurance. They simply show what the cost of industrial insurance is and how much greater that cost is than the cost of ordinary insurance, and illustrate, as did the study of conditions of living among the poor, that the smaller the earning power of a wage-earner the smaller also is the purchasing power of each of his dollars.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

MASSACHUSETTS.

Thirty-sixth Annual Report of the Bureau of Statistics of Labor.
March, 1906. Charles F. Pidgin, chief. xxiii, 613 pp.

This report consists of six parts, as follows: Part I, Industrial education of working girls, 37 pages; Part II, Cotton manufactures in Massachusetts and the Southern States, 68 pages; Part III, Old-age pensions, 44 pages; Part IV, Industrial opportunities not yet utilized in Massachusetts, 151 pages; Part V, Statistics of manufactures, 1903, 1904, 71 pages; Part VI, Labor and industrial chronology for the year ending September 30, 1905, 227 pages.

INDUSTRIAL EDUCATION OF WORKING GIRLS.—This investigation was undertaken by the National League of Women Workers in order to determine the kind of education needed by the working girl and to what extent the need was supplied by the public schools. Of 2,000 schedules secured in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania and presented to the Bureau for tabulation only 982 were available for the preparation of the tables showing for the working girls engaged in each of 14 occupations the number of native and of foreign birth, where educated, class of school attended, age at beginning work, lowest and highest wages received, economic relation of the worker to her home, and number of years at work. The chapter closes with a description of a training school for girls recently opened in Boston.

COTTON MANUFACTURES IN MASSACHUSETTS AND IN THE SOUTHERN STATES.—The object of this investigation was to secure information for comparative purposes relative to the industrial, economic, and social conditions in the two sections so far as it related to this class of manufactures. The presentation consists of a history of the development of the industry in three Southern States; a discussion of the effect of immigration; wages, age, and housing of the employees; natural advantages; cost of living; transportation and taxes; capital invested; classification of looms, and class and amount of production in the two sections. The following table, based on the United States

census returns, is presented, showing the percentage of cost each item entering into the manufactured product is of the total cost:

PERCENTAGE OF COST EACH ITEM ENTERING INTO COTTON MANUFACTURE IS OF TOTAL COST, IN MASSACHUSETTS AND IN THREE SOUTHERN STATES, 1890 AND 1900.

State.	Per cent of cost each item is of total cost.										Total.	
	Raw cotton used.		Other raw material.		Salaries.		Wages.		Miscellaneous expenses.			
	1890.	1900.	1890.	1900.	1890.	1900.	1890.	1900.	1890.	1900.	1890.	1900.
Massachusetts...	45.67	40.68	17.56	15.85	1.24	2.10	28.07	33.80	7.46	7.57	100.00	100.00
Georgia.....	61.00	60.01	10.70	8.80	1.82	2.66	19.84	22.08	6.64	6.45	100.00	100.00
North Carolina..	64.95	56.47	10.14	15.58	2.05	2.43	17.76	21.25	5.10	4.27	100.00	100.00
South Carolina..	62.41	61.25	6.41	9.58	1.51	2.20	16.80	20.79	5.87	6.18	100.00	100.00

The following table compares statistics of cotton manufactures for 1870 with those for 1900, in Massachusetts and in three Southern States:

COMPARATIVE STATISTICS OF COTTON MANUFACTURES IN MASSACHUSETTS AND IN THREE SOUTHERN STATES, 1870 AND 1900.

State.	Capital invested.		Cotton mills.		Spindles.		Looms.	
	1870.	1900.	1870.	1900.	1870.	1900.	1870.	1900.
Massachusetts.....	\$44,714,375	\$155,761,193	191	163	2,619,541	7,784,687	55,343	179,280
Georgia.....	3,433,265	24,158,159	34	67	85,602	815,545	1,887	19,393
North Carolina.....	1,030,900	33,011,516	33	177	39,837	1,133,432	618	25,469
South Carolina.....	1,337,000	39,258,946	12	80	34,940	1,431,349	745	42,663

State.	Value of goods made.		Average number of employees.		Total wages paid.		Average yearly earnings.	
	1870.	1900.	1870.	1900.	1870.	1900.	1870.	1900.
Massachusetts.....	\$59,493,153	\$110,478,327	43,512	92,085	\$13,589,305	\$32,327,443	\$312.31	\$251.06
Georgia.....	3,648,973	18,457,645	2,846	18,283	611,868	3,566,951	214.99	195.10
North Carolina.....	1,345,052	28,372,798	1,453	30,273	182,951	5,127,087	125.91	169.36
South Carolina.....	1,529,937	29,723,919	1,123	30,201	257,680	5,066,840	229.46	167.77

OLD-AGE PENSIONS.—The purpose of this report was to consider the possibility of the State establishing a system of old-age pensions. There is presented in condensed form a summary of an article on the insurance of workingmen, which appeared in the bureau report for 1900, giving the conditions under which old-age pensions are granted in various foreign countries. In addition tables are given showing for the year 1900 the total expenditures for all purposes of each city and town in the State, expenditures for charity, and per cent of expenditures for charity of total expenditures; population, expenditure per capita for all purposes, and expenditure per capita for charity; total valuation, total taxation, and number of male polls assessed; per cent of expenditures for charity of total valuation, per cent of expenditures for charity of total taxation, and average expenditures for charity per

male poll; also, number of persons over 60 years of age in the State, by sex and age groups, and number of deaths of persons over 60 years of age, by sex and age groups. A discussion follows comparing the probable expense to the State of a system of old-age pensions, with the expenditures for charity for the year 1900.

INDUSTRIAL OPPORTUNITIES NOT YET UTILIZED.—This chapter consists of returns from the boards of selectmen of 231 towns. The purpose of this investigation was to ascertain the advantages offered by these towns for the establishment of some industry. From these returns a series of eight tables is presented showing as follows: Land available for manufacturing purposes, railroad facilities, and water power available; local facilities, such as gas and electric-light plants, electric railways, etc.; raw materials and natural products; idle workshops and factories; industries wanted, by towns; industries wanted, by industries; summer resorts, and tax rebates.

STATISTICS OF MANUFACTURES, 1903 AND 1904.—This is the nineteenth of a series of annual reports on manufacturing statistics. The statistics presented were compiled from the returns of 4,730 establishments, each of which made a report for the two years under consideration. Comparative tables are given, showing for the years 1903 and 1904 the number of private firms, corporations, and industrial combinations; number of partners in firms, and stockholders in corporations, by sex, etc.; capital devoted to production, 1903; capital invested, 1904; cost of material used and value of product; the smallest, greatest, and average number of persons employed, and aggregate employees, by months; total wages paid during each year, average yearly earnings per employee, and classified weekly wages in selected industries, by sex and age; days in operation during each year, and proportion of business done. Seventy-nine classified industries are represented.

The principal facts as to ownership are shown in the following table:

FIRMS, CORPORATIONS, AND INDUSTRIAL COMBINATIONS, AND PARTNERS AND STOCKHOLDERS IN 4,730 IDENTICAL ESTABLISHMENTS, 1903 AND 1904.

Year.	Firms.	Corporations.	Industrial combinations.	Partners.	Stockholders.	Average partners to a firm.	Average stockholders to a corporation.
1903.....	3,085	1,469	20	4,777	56,115	1.55	38.20
1904.....	2,997	1,552	20	4,611	56,053	1.54	36.12

From the above table it will be seen that the tendency continues to be toward an increase of number of establishments controlled by corporations and a decrease of establishments under private control.

The following table presents statistics separately for 9 principal industries, in aggregate for 70 other industries, and totals for the 79 industries reported on for the years 1903 and 1904:

STATISTICS OF MANUFACTURES, 1903 AND 1904.

Industry.	Number of establishments.	Value of stock used.		Increase (+) or decrease (-).	
		1903.	1904.	Amount.	Per cent.
Boots and shoes.....	656	\$100,737,707	\$103,916,188	+\$3,178,481	+ 3.16
Carpetings.....	10	6,844,167	6,818,838	- 25,329	- .37
Cotton goods.....	166	78,274,573	82,407,903	+ 4,133,330	+ 5.28
Leather.....	105	20,846,121	20,548,240	- 297,881	- 1.43
Machines and machinery.....	375	22,952,922	20,240,029	- 2,712,893	-11.82
Metals and metallic goods.....	393	26,017,516	21,771,869	- 4,245,647	-16.32
Paper.....	81	16,953,773	17,737,702	+ 783,929	+ 4.62
Woolen goods.....	160	31,975,672	32,439,770	+ 464,098	+ 1.45
Worsted goods.....	43	26,763,110	30,668,362	+ 3,905,252	+14.59
Other industries (70).....	2,741	236,775,893	233,660,311	- 3,115,582	- 1.32
Total.....	4,730	568,141,454	570,209,212	+ 2,067,758	+ .36

Industry.	Goods made and work done.			Wages paid.		
	1903.	1904.	Per cent of increase (+) or decrease (-).	1903.	1904.	Per cent of increase (+) or decrease (-)
Boots and shoes.....	\$159,983,193	\$165,709,642	+ 3.58	\$34,498,626	\$34,586,282	+ 0.25
Carpetings.....	11,209,336	9,654,392	-13.87	2,238,164	2,021,859	- 9.66
Cotton goods.....	134,741,484	132,564,840	- 1.62	37,105,519	32,267,548	-13.04
Leather.....	29,719,280	29,228,192	- 1.65	3,597,466	3,842,277	+ 6.81
Machines and machinery...	58,484,782	51,942,230	-11.19	18,721,781	17,139,626	- 8.45
Metals and metallic goods...	49,207,591	44,760,700	- 9.04	13,257,588	11,704,292	-11.72
Paper.....	30,202,100	31,921,767	+ 5.69	5,104,929	5,450,723	+ 6.77
Woolen goods.....	56,893,318	54,501,657	- 4.20	11,264,047	11,003,103	- 2.32
Worsted goods.....	46,032,840	46,426,816	+ .86	7,354,201	7,291,478	- .85
Other industries (70).....	430,075,559	430,747,398	+ .16	76,951,513	77,275,061	+ .42
Total.....	1,006,549,483	997,457,634	- .90	210,093,834	202,582,249	- 3.58

In six of the leading industries, and in the total for all industries, there was a decrease in 1904 in the value of product as compared with that for 1903, while in three of the leading industries an increase was shown for the year 1904. The greatest increase was in the paper industry, viz, 5.69 per cent. There was an increase in the amount of wages paid in three of the leading industries in 1904, as compared with 1903, the greatest increase being in the leather industry, where it was 6.81 per cent, while the value of product decreased 1.65 per cent. The increase per cent in value of product and in wages paid in the paper industry differ but little. While the value of manufactured products in the worsted goods industry increased 0.86 per cent, the amount paid in wages fell off 0.85 per cent. There seems to have been a general decline in 1904 both in the value of products and in the amount paid for wages, as compared with 1903.

In 1903 the capital devoted to production in the 79 industries amounted to \$548,314,237, and in 1904 the capital invested amounted to \$807,433,857.

The table following presents data relative to employees, earnings, and days in operation, the establishments considered being the same as in the preceding table:

AVERAGE NUMBER OF EMPLOYEES, AVERAGE YEARLY EARNINGS, AND AVERAGE DAYS IN OPERATION IN 9 PRINCIPAL INDUSTRIES, IN 70 OTHER INDUSTRIES, AND IN ALL INDUSTRIES, 1903 AND 1904.

Industry.	Average number of employees.			Average yearly earnings.			Average days in operation.		
	1903.	1904.	Per cent of increase (+) or decrease (-).	1903.	1904.	Per cent of increase (+) or decrease (-).	1903.	1904.	Per cent of increase (+) or decrease (-).
Boots and shoes...	66,797	66,692	- 0.16	\$516.47	\$518.60	+0.41	294.16	295.20	+0.35
Carpetings.....	5,062	4,774	- 5.69	442.15	423.51	-4.22	303.63	290.20	-4.42
Cotton goods.....	94,270	88,138	- 6.50	393.61	366.10	-6.99	290.51	279.66	-3.73
Leather.....	7,200	7,695	+ 6.88	499.65	499.32	- .07	298.46	300.39	+ .65
Machines and machinery.....	32,491	29,520	- 9.14	576.21	580.61	+ .76	298.24	300.59	+ .79
Metals and metallic goods.....	24,024	21,411	-10.88	551.85	546.65	- .94	297.04	303.38	+2.13
Paper.....	10,964	11,542	+ 5.27	465.61	472.25	+1.43	284.88	294.12	+3.24
Woolen goods.....	26,659	26,178	- 1.80	422.52	420.32	- .52	292.16	297.23	+1.74
Worsted goods.....	18,805	18,262	- 2.89	391.08	399.27	+2.09	285.36	301.96	+5.82
Other industries(70)	159,297	159,171	- .08	483.07	485.48	+ .50	294.11	294.92	+ .28
Total	445,569	433,383	- 2.73	471.52	467.44	- .87	293.28	293.12	- .05

Only two of the principal industries show an increase in the average number of employees in 1904 as compared with 1903. In the leather industry the increase in the number of employees was 6.88 per cent, and in the paper industry 5.27 per cent. Average yearly earnings increased in 1904 over 1903 in the following industries: Boots and shoes, machines and machinery, paper and worsted goods, and declined in carpetings, cotton goods, leather, metals and metallic goods, and woolen goods. The number of days in operation increased in seven of the nine principal industries. In all industries a decrease is shown in the three items of average employees, average earnings, and average days in operation.

The table following shows the number of employees earning the indicated weekly wages. The number of employees given is the number reported in each industry for the week showing the largest number of employees, and does not, therefore, agree with the number shown in the preceding table:

NUMBER OF MALE AND FEMALE ADULTS AND OF YOUNG PERSONS IN 79 INDUSTRIES, BY CLASSIFIED WEEKLY WAGES, 1903 AND 1904.

Classified weekly wages.	1903.				1904.			
	Persons 21 years of age or over.		Young persons (under 21).	Total.	Persons 16 years of age or over.		Young persons (under 16).	Total.
	Males.	Females.			Males.	Females.		
Under \$5.....	7,738	14,592	29,656	51,986	15,737	28,691	12,374	56,802
\$5 or under \$6.....	8,582	16,383	17,062	42,027	14,231	24,699	2,367	41,297
\$6 or under \$7.....	17,100	24,419	12,469	53,988	22,794	29,700	966	53,460
\$7 or under \$8.....	25,975	20,088	6,276	52,339	29,316	22,860	283	52,459
\$8 or under \$9.....	27,634	16,568	3,139	47,341	30,543	17,759	101	48,403
\$9 or under \$10.....	41,734	13,820	1,772	57,326	39,616	13,776	30	53,422
\$10 or under \$12.....	50,229	10,647	1,022	61,898	50,782	10,948	9	61,739
\$12 or under \$15.....	58,703	4,978	467	64,148	57,374	5,019	.....	62,393
\$15 or under \$20.....	48,935	1,519	89	50,543	48,554	1,463	.....	50,017
\$20 or over.....	16,568	164	14	16,746	16,468	145	.....	16,613
Total.....	303,198	123,178	71,966	498,342	325,415	155,060	16,130	496,605

The figures in the above table are not comparable, except as to the totals in the last column under each year, due to the fact that a different form of question was used in 1904 from that used in 1903 and in previous years.

In order to show the actual result of the productive forces of industry, the element of cost of material must be deducted from the total value of product, and the remainder will show only the industry product, or the new values created. This has been done in the case of the nine leading industries; also the division of industry product between the wage fund and the fund devoted to profit and minor expenses, as freight, insurance, interest, rent, commissions, salaries, etc. The results for the years 1903 and 1904 appear in the table following:

INDUSTRY PRODUCT, WAGES, AND PROFIT AND EXPENSES IN NINE SELECTED INDUSTRIES, 1903 AND 1904.

1903.

Industry.	Industry product.	Wages.	Profit and minor expenses.	Per cent of industry product.	
				Paid in wages.	Devoted to profit and minor expenses.
Boots and shoes.....	\$59,245,486	\$34,498,626	\$24,746,860	58.23	41.77
Carpetings.....	4,365,169	2,238,164	2,127,005	51.27	48.73
Cotton goods.....	56,466,911	37,105,519	19,361,392	65.71	34.29
Leather.....	8,873,159	3,597,466	5,275,693	40.54	59.46
Machines and machinery.....	35,531,860	18,721,781	16,810,079	52.69	47.31
Metals and metallic goods.....	23,190,075	13,257,588	9,932,487	57.17	42.83
Paper.....	13,248,327	5,104,929	8,143,398	38.53	61.47
Woolen goods.....	24,917,646	11,264,047	13,653,599	45.21	54.79
Worsted goods.....	19,269,730	7,354,201	11,915,529	38.16	61.84

1904.

Boots and shoes.....	\$61,793,454	\$34,586,282	\$27,207,172	55.97	44.03
Carpetings.....	2,835,554	2,021,859	813,695	71.30	28.70
Cotton goods.....	50,156,937	32,267,548	17,889,389	64.33	35.67
Leather.....	8,679,952	3,842,277	4,837,675	44.27	55.73
Machines and machinery.....	31,702,201	17,139,626	14,562,575	54.06	45.94
Metals and metallic goods.....	22,988,831	11,704,292	11,284,539	50.91	49.09
Paper.....	14,184,065	5,450,723	8,733,342	38.43	61.57
Woolen goods.....	22,061,887	11,003,103	11,058,784	49.87	50.13
Worsted goods.....	15,758,454	7,291,478	8,466,976	46.27	53.73

In five of the nine industries, in 1903, more than one-half of the industry product was paid out in wages, the largest showing being in cotton goods, with 65.71 per cent, followed by boots and shoes, with 58.23 per cent, and metals and metallic goods, with 57.17 per cent. The industry devoting the lowest proportion of the industry product to labor was worsted goods, with 38.16 per cent. In 1904, likewise, five industries paid out more than one-half of the industry product in wages. The carpet industry paid the highest proportion, 71.30 per cent, and the paper industry the lowest, 38.43 per cent.

LABOR AND INDUSTRIAL CHRONOLOGY.—This chronology presents data on the following subjects for each of the cities and towns of the State for the year ending September 30, 1905: Strikes and lockouts, wages and hours of labor, trade unions, industrial changes, and workingmen's benefits. The chapter closes with a reprint of the labor laws enacted in Massachusetts in 1905.

Of the 158 labor disputes during the year 153 were strikes, 2 were lockouts, and 3 partook of the nature of both a strike and a lockout. The number of disputes shows a decrease of 40 from that of the previous year, and the strikes were of minor importance and involved a smaller number of persons. The trades in which labor disputes occurred, with the number of disputes in each, follow: Bakers, 2; boot and shoe workers, 21; bricklayers and masons, 4; carpenters, 7; plumbers and steam fitters, 3; other building trades, 6; garment workers, 7; granite cutters, 7; laborers, 12; metal workers, 11; teamsters and handlers, 17; textile workers, 45; and miscellaneous, 16. The following table shows the number of disputes, by causes and results:

STRIKES AND LOCKOUTS, BY CAUSES AND RESULTS, YEAR ENDING SEPTEMBER 30, 1905.

Cause.	Result.					Total.
	Succeed- ed.	Compromised.	Failed.		Result unknown.	
			Strikers rein- stated.	Places filled.		
Against discharge of employees.....	2	1	3	4	.....	10
Against nonunion employees.....	4	.....	2	5	2	13
Against objectionable employees.....	.....	.....	1	2	.....	3
Against reduction in wages.....	3	3	4	2	1	13
Against ten-loom system and electric warp-stop motion.....	3	3	4	2	.....	12
Against violation of agreement.....	1	1	.....	1	.....	3
Against working conditions.....	1	1	4	2	.....	8
For increase of wages.....	10	11	7	8	10	46
For increase of wages and better work- ing conditions.....	.....	3	.....	.....	.....	3
For increase of wages and shorter work- day.....	1	3	2	.....	1	7
For recognition of union and eight-hour day.....	1	1	.....	3	3	8
For shorter workday.....	5	2	3	4	.....	14
In sympathy.....	.....	.....	1	3	.....	4
Miscellaneous.....	6	1	1	5	1	14
Total.....	37	30	32	41	18	158

There were 69 wage disputes—46 for increase, 13 against reduction, and 10 for increase in combination with other causes. Of this number 14 succeeded, 20 were compromised, 23 failed, and for 12 the results are not stated. Of the 158 strikes and lockouts 37 succeeded, 30 were compromised, 73 failed, and for 18 the results are not stated. Of 110 disputes, returns were complete as to number

of persons directly involved and working days lost. The following table shows these items:

NUMBER AND DURATION OF DISPUTES, PERSONS DIRECTLY INVOLVED, AND WORKING DAYS LOST, YEAR ENDING SEPTEMBER 30, 1905.

Duration of disputes.	Number of disputes.	Persons directly involved.	Working days lost.	Duration of disputes.	Number of disputes.	Persons directly involved.	Working days lost.
1 day.....	13	631	631	18 days.....	3	1,040	18,720
2 days.....	18	942	1,884	19 days.....	1	15	285
3 days.....	15	1,068	3,204	20 days.....	1	25	500
4 days.....	11	462	1,848	21 days.....	1	160	3,360
5 days.....	3	83	415	24 days.....	3	83	1,992
6 days.....	9	530	3,180	30 days.....	2	163	4,890
7 days.....	8	735	5,145	38 days.....	1	14	532
8 days.....	2	65	520	48 days.....	2	275	13,200
9 days.....	1	135	1,215	54 days.....	2	253	13,662
10 days.....	2	131	1,310	84 days.....	1	40	3,360
11 days.....	1	7	77	150 days.....	1	30	4,500
12 days.....	5	298	3,576				
14 days.....	3	155	2,170				
16 days.....	1	15	240				
				Total.....	110	7,355	90,416

When considered with previous years, comparatively few changes in wages and working hours were reported for the year. The granting of the Saturday half holiday during the summer months, and in some occupations during the entire year, is becoming more general each year. All classes commended the early closing hour for retail stores. Where uniformity exists and working rules and closing hours are strictly adhered to in the same locality among one craft, it can not be said to have proved disadvantageous to the employers.

The information relative to trade unions gives for the year the new unions formed, new affiliations, disbanding of old unions, growth of the closed shop, conditions of employment, consideration given labor legislation, etc. As recorded, numerically the trade unions have decreased rather than increased, since nearly 175 unions went out of existence during the year, while less than 100 new ones were formed. This does not necessarily mean a proportional decrease in trade-union membership. There were more amalgamations of unions of allied crafts during the year than had taken place for some time. About 250 locals and 37 central bodies are now affiliated with the State branch of the American Federation of Labor. While the unions continued generous in voting financial aid to members of trade unions on strike, it is a noticeable fact that the moral assistance in the way of ordering sympathetic strikes was certainly on the wane.

Of industrial changes during the year, 203 new establishments were incorporated, with an authorized capital stock of \$20,676,000; 161 private firms were changed to corporations, with an authorized capital stock of \$9,094,900, and there were 80 reorganizations, with an authorized capital stock of \$16,623,000, making a total of 444

manufacturing establishments incorporated, with an authorized capital stock of \$46,393,900. There were 217 new factories erected, 172 additions to factories, and 27 factories or additions in process of construction. Twenty industrial plants came into the State from other States, 10 moved out of the State, and 42 moved from one part of the State to another. There were during the year 282 new firms which began operations and 45 firms went out of business; also 435 changes in firms and 59 changes in or additions to product. There were 85 temporary shut downs, covering 482 weeks, 29 shut downs of unknown length, and 10 indefinite shut downs.

Under workingmen's benefits is recorded the action taken by employers to improve the condition of their employees or measures taken by trade unions or employees themselves for the betterment of the social and industrial condition of the workingmen.

MICHIGAN.

Twenty-second Annual Report of the Bureau of Labor and Industrial Statistics, including the Twelfth Annual Report of the Inspection of Factories. 1905. Scott Griswold, Commissioner, xxii, 512 pp.

In addition to factory, store, hotel, and tenement-house inspection and the work of women inspectors (286 pages), the following subjects are presented in this report: State court of mediation and arbitration, 15 pages; penal and reformatory institutions, 10 pages; statistics of farm and domestic labor, 35 pages; statistics of electrical railways, 6 pages; the coal industry, 10 pages; special industries, 13 pages; classification of labor and wages, 14 pages; the Portland cement industry, 18 pages; manufacture of beet sugar, 30 pages; manufacture of cigars, 40 pages; manufacture of salt, 6 pages; special mention of industrial firms, 10 pages; laws enforced by the department, 15 pages.

STATE COURT OF MEDIATION AND ARBITRATION.—Under this title is presented the first biennial report of the State court of mediation and arbitration, and covers the operations of that body for the years 1903 and 1904. It contains the recommendations of the court and a discussion of the difficulties in arbitration; also a history is given of the labor disputes occurring in the State for the years 1903 and 1904, by locality and occupation, with the number of persons involved, cause, and result of each dispute, etc.

STATISTICS OF FARM AND DOMESTIC LABOR.—Tables are given showing by counties and townships for the four sections into which the State was divided the number of farmers canvassed; average size of farms; number of males employed by the year, month, and day; average number of months worked per year; average monthly wages, including board; estimated average value of board; number of farmers

employing females for domestic work; average weekly wages of these employees, including board; estimated average value of board, etc.

The following summary is compiled from the entire canvass, the returns being for the year 1904:

Number of farmers canvassed.....	5, 922
Number reporting scarcity of farm laborers.....	3, 782
Average size of farms (acres).....	165
Number of farm laborers employed by the year.....	1, 665
Number of farm laborers employed by the month.....	5, 086
Number of farm laborers employed by the day.....	3, 754
Average months worked per year.....	8. 5
Average monthly wages of laborers, with board.....	\$23. 11
Estimated average value of board per month.....	\$12. 00
Number employing domestic female labor.....	1, 521
Number reporting scarcity of female labor.....	3, 300
Average weekly wages of domestics, with board.....	\$2. 23
Estimated average value of board per week.....	\$2. 32
Number of children under 16 years of age employed as wage-earners.....	269

STATISTICS OF ELECTRIC RAILWAYS.—Under this caption a table is given showing for each of 25 lines reporting in 1904 the miles of single track operated, average number of employees, and number of passengers carried. Statistics were compiled showing for the year 1904 the following items: Capital stock, \$34,075,000; value of lines and equipment, \$45,000,000; miles of road, measured as single track, 1,158; amount expended during the year for permanent improvement, \$1,682,718; amount received from passenger traffic, \$6,581,275; from other sources, \$328,926; number of cars operated, 1,429; passengers carried, 151,001,029; average fare for each passenger carried, 4½ cents; amount paid for wages, \$3,499,978.

The following table gives the number of employees, by occupation, and average daily hours of labor and average daily wages:

WAGES AND HOURS OF LABOR OF EMPLOYEES ON 25 ELECTRIC RAILWAYS, 1904.

Occupation.	Em- ploy- ees.	Aver- age daily hours.	Aver- age daily wages.	Occupation.	Em- ploy- ees.	Aver- age daily hours.	Aver- age daily wages.
Linemen.....	82	10	\$2. 30	Firemen.....	77	11	\$1. 86
Inspectors.....	97	10	2. 11	Oilers.....	41	11	1. 87
Machinists.....	50	10	2. 02	Carpenters.....	85	10	2. 24
Clerks, etc.....	243	9	1. 90	Painters.....	68	10	1. 96
Conductors.....	1, 276	10	2. 02	Car house men.....	218	11	1. 59
Motormen.....	1, 247	10	2. 05	Track laborers.....	1, 214	10	1. 51
Electricians.....	44	10	2. 24	Unclassified.....	210	10	1. 72
Engineers.....	53	11	2. 94				

THE COAL INDUSTRY.—The following table summarizes for 1903 and 1904 the statistical part of the report on this industry:

COAL MINING STATISTICS, 1903 AND 1904.

Items.	1903.	1904.
Mines in operation.....	30	28
Average number of employees.....	3,149	2,714
Average daily hours of labor.....	7.7	7.7
Average days worked per month.....	21.4	18.3
Average daily wages, all employees.....	\$2.91	\$3.01
Production in tons.....	1,581,346	1,414,834
Total cost of production.....	\$2,482,000	\$2,286,160
Cost of production per ton.....	\$1.57	\$1.62

A table is also given showing, by counties, the accidents occurring in coal mines during the year from December 4, 1903, to November 26, 1904.

SPECIAL INDUSTRIES.—This chapter is devoted to certain special industries, and discusses their development, class of manufacture, capital invested, output, number of employees, etc. Among the industries mentioned are thrashing machines and engines, grape juice, furniture, and stoves.

CLASSIFICATION OF LABOR AND WAGES.—A canvass was conducted in 1904 among the employees of factories and workshops in every county of the State where factories are operated, the object being to collect information in regard to daily hours and wages in classified occupations. Data were collected from 212,868 employees. The total amount paid to these employees in 11 months for salaries and wages was \$107,738,039. Daily hours of labor averaged 9.8. The following table gives comparative figures for 1903 and 1904:

NUMBER AND AVERAGE DAILY WAGES OF PERSONS EMPLOYED IN FACTORIES AND WORKSHOPS, 1903 AND 1904.

Factory employees.	1903.		1904.	
	Number.	Average daily wages.	Number.	Average daily wages.
Superintendents.....	5,276	\$4.43	6,155	\$4.32
Foremen.....	7,419	2.86	7,193	2.91
Office clerks, males.....	5,977	2.61	6,329	2.70
Office clerks, females.....	3,709	1.33	3,727	1.36
Wage-earners, male adults.....	164,482	1.83	153,045	1.83
Wage-earners, female adults.....	31,259	.95	31,290	1.01
Wage-earners, male, between 14 and 16 years of age.....	3,666	.76	3,404	.79
Wage-earners, female, between 14 and 16 years of age.....	1,511	.65	1,725	.64
Total.....	223,299	1.75	212,868	1.77

PORTLAND CEMENT INDUSTRY.—Under this title is given a list of the cement plants in the State, with their daily capacity, number of employees, wages paid, etc. During the year 1904, 14 plants were in operation, the cost of which aggregated \$7,550,781. Employment was furnished to 1,500 persons, 25 per cent being classed as skilled

labor. The average daily wages of all employees were \$2.20; of skilled labor, \$3.93; the total amount paid in wages for the year was (for 12 plants) \$943,200.

MANUFACTURE OF BEET SUGAR.—There were 16 plants in operation during the year 1904. Besides these 3 other plants were canvassed for data. The cost of the 19 plants aggregated \$12,390,000. The product of those in operation amounted to 110,000,000 pounds of sugar, requiring 449,072 tons of beets, grown on 59,634 acres of land. The number of skilled laborers employed was 512, with an average daily wage of \$2.82; the number of unskilled laborers employed was 2,910, with an average daily wage of \$1.82. The plants were in operation on an average 59 days each.

MANUFACTURE OF CIGARS.—Cigar factories to the number of 525 were canvassed in 68 of the counties of the State, tho over 50 per cent of the output was the product of factories in Wayne County, with the city of Detroit. The hours of daily labor averaged 8.2; average daily earnings ranged from \$3.08 for superintendents to \$2.88 for foremen, and \$2.18 for ordinary cigar makers. The trade is fairly well organized, there being 430 union, 55 open, and 40 nonunion shops. The aggregate capital invested amounted to \$1,513,125, and the value of product for the year was \$6,481,637. The following table shows the number and average daily wages of the different classes of employees in the cigar industry in 1904:

NUMBER AND AVERAGE DAILY WAGES OF EMPLOYEES IN CIGAR FACTORIES, 1904.

Classified employees.	Number.	Average daily wages.	Classified employees.	Number.	Average daily wages.
Superintendents.....	401	\$3. 08	Female employees	2, 716	\$1. 15
Foremen.....	160	2. 88	Children under 16 years of age.	560	. 57
Packers.....	269	1. 78			
Shipping clerks.....	31	1. 76	Total.....	6, 111	1. 56
Other male employees.....	1, 974	2. 18			

MANUFACTURE OF SALT.—In 1904 statistics were secured from 41 plants, and the following summary gives the principal items concerning the operation of these plants: Total cost of all plants, \$2,358,762; average annual cost of repairs, \$137,598; product, 4,689,626 barrels; persons employed, 1,365; total wages paid, \$741,150; average daily wages, \$1.81.

SPECIAL MENTION OF INDUSTRIAL FIRMS.—Under this head special mention is made of 22 industrial firms, naming the industry in which engaged, capital invested, provisions for the health and comfort of employees, volume and value of product, number of employees, amount of annual pay roll, etc.

LAWS ENFORCED BY THE DEPARTMENT.—This consists of a reproduction of the laws of the State bearing on labor, and which it is the duty of the department to enforce.

NEBRASKA.

Ninth Biennial Report of the Bureau of Labor and Industrial Statistics for the years 1903 and 1904. Burrett Bush, Deputy Commissioner. 204 pp.

The subjects presented in this report are: Suggested legislation and labor laws, 19 pages; child labor, 43 pages; strikes, 2 pages; fire escape and female and child labor law enforcement, 3 pages; the value of statistics, 10 pages; the value of statistics to Nebraska, 8 pages; industrial and social statistics, 89 pages.

SUGGESTED LEGISLATION AND LABOR LAWS.—In connection with the reproduction of the present labor laws of the State, the commissioner of the bureau suggests the enactment of additional legislation in the interest of labor, based on the experience gained in the performance of the duties of his office.

CHILD LABOR.—Under this caption is presented a discussion of what constitutes effective child-labor laws, followed by an analysis of the various forms of child-labor legislation in the several States.

STRIKES.—Brief accounts are given of three important strikes, involving 7,050 persons, which occurred during the biennial period of 1903 and 1904, viz, the Union Pacific Railroad strike, the teamsters' strike of Omaha, and the packing house strike of South Omaha.

FIRE ESCAPE AND FEMALE AND CHILD LABOR LAW ENFORCEMENT.—The enforcement of the law relating to fire escapes and that relating to the employment of female and child labor as required of the State labor commissioner is briefly detailed in this section of the report.

THE VALUE OF STATISTICS.—Two parts of the report are embraced under this caption. The first part, "The value and influence of labor statistics," is a reproduction of an article on the subject by Carroll D. Wright; the second part, "The value of statistics to Nebraska," consists of an outline of the object and work of the labor bureau, together with the opinion of leading citizens of the State on the value of the bureau as a means of disseminating statistical and other information regarding the State.

INDUSTRIAL AND SOCIAL STATISTICS.—A variety of data is here presented. The statistics are partly the result of original inquiry and partly reproductions from State and Federal reports.

NEW YORK.

Fourth Annual Report of the Department of Labor, for the year ended September 30, 1904. Transmitted to the legislature April 17, 1905. John McMackin, Commissioner. 2 vols.

This general report embraces two volumes as follows: Volume I, Report of the commissioner of labor on the operations of the department, ninth annual report of the State free employment bureau in New York City, legislation and judicial decisions affecting the interests of working people, the open-shop question, the child-labor law, eighteenth annual report of the bureau of mediation and arbitration, and nineteenth annual report of the bureau of factory inspection; Volume II, Twenty-second annual report of the bureau of labor statistics.

REPORT OF THE COMMISSIONER.—This consists of a general review of the four distinct lines of work carried on by the State department of labor, viz, the enforcement of the factory and other labor laws (bureau of factory inspection); the adjustment of controversies between employers and employees (bureau of mediation and arbitration); the investigation of industrial conditions (bureau of labor statistics); the bringing together of employers seeking help and workers seeking positions (free employment bureau in New York City).

FREE EMPLOYMENT BUREAU.—Since its establishment in 1897 the work of the State free employment bureau has steadily increased. During the year 1904 there were 6,650 persons who made application for work, 3,754 men and 2,896 women. Of the men, 1,620 were native born and 2,134 were foreign born; 822 were married and 2,932 were single. Of the women, 999 were native born and 1,897 were foreign born; 1,473 were married and 1,423 were single. Of the 2,295 married people, 869 reported having 1,920 children depending on them for support. During the year 4,542 applications for help were made. There were 4,642 situations (covering 41 trades and vocations) secured, 1,004 by men and 3,638 by women.

THE OPEN-SHOP QUESTION.—The question of the open shop has, in most cases, been raised by recently organized associations of employers. This discussion of the question consists of a reproduction of various papers by students of economics bearing on the different phases of the subject, together with the attitude, as expressed in convention, of several religious bodies toward capital and labor.

THE CHILD-LABOR LAW.—On October 1, 1903, important amendments made by the legislature in 1903 to the various acts governing the employment of children went into effect. As a consequence of the advanced age requirements of the new legislation, the inspectors

found 13,389 children between 14 and 16 years of age in the factories visited in 1904, as compared with 18,160 in 1903, a reduction of 26.3 per cent. As the aggregate number of employees of all ages was approximately the same in each year, the proportion of child laborers declined from 21 per 1,000 laborers in 1903 to 15 per 1,000 in 1904. It is claimed that New York is freer from child labor than any other industrial State in the Union.

Eighteenth Annual Report of the Board of Mediation and Arbitration, for the year ended September 30, 1904. 205 pp.

This report contains an account of the labor disputes within the State for the year ending September 30, 1904, together with full particulars of the more important disputes within the period, the text of joint trade and industrial agreements, and the text of the laws governing the board of mediation and arbitration.

During the year ending September 30, 1904, the board of mediation and arbitration collected reports relative to 124 industrial disputes. The number of working people directly involved in these disputes was 57,308, while 51,225 more were thrown out of work as a result of the disputes. The number of working days lost by the workers directly concerned in the disputes was 1,840,554, while those indirectly affected lost 1,658,907, making a total of 3,499,461 working days lost.

Considering industries, the greatest number of disputes was in the building trades, it being 40, followed by 24 in metals, machinery, etc., 14 in transportation, etc., 9 in textiles, and 8 in clothing, etc. Increase of wages was the cause or object in 49 disputes, trade unionism in 30, reduction of wages in 12, reduction of hours in 9, and working arrangements in 6. Of results of disputes, 64 (involving 23,320 strikers) were in favor of employers, 26 (involving 3,655 strikers) were in favor of employees, and 34 (involving 30,333 strikers) were compromised.

The mode of settlement of the disputes reported was as follows:

MODE OF SETTLEMENT OF DISPUTES, YEAR ENDING SEPTEMBER 30, 1904.

Mode of settlement.	Number of disputes.	Employees involved.
Direct negotiations.....	56	11,854
Return to work on employers' terms.....	29	60,134
Replacement of workers.....	31	2,083
Mediation or conciliation.....	4	2,712
Arbitration of trade boards.....	1	18,359
Arbitration of individuals.....	1	300
No settlement.....	2	13,091
Total.....	124	108,533

In 56 disputes, involving 11,854 persons, the mode of settlement was by direct negotiations between the employers and the workmen. In 29 disputes, involving 60,134 persons, the employees returned to work on the employers' terms, while in 31 disputes, involving 2,083 persons, the employees were replaced by other workers.

Forty-two of the total disputes, involving 46,600 persons directly and 36,080 indirectly and resulting in a loss of 2,365,939 working days, were in New York City.

Twenty-second Annual Report of the Bureau of Labor Statistics, for the year ended September 30, 1904. lix, 864 pp.

The subjects presented in this report are: Trade unions in 1904, 22 pages; the state of employment, 12 pages; wages and earnings, 14 pages; changes in hours of labor, 3 pages; appendix (statistical tables), 857 pages.

TRADE UNIONS.—On September 30, 1904, there existed in the State 2,504 local trade unions and similar labor organizations, the aggregate membership of which was 391,676 working men and women. In the table following is shown the number of organizations and the membership, by sex, in each year from 1894 to 1904:

NUMBER OF TRADE UNIONS AND MEMBERSHIP, BY SEX, 1894 TO 1904.

Date.	Number of unions.	Membership.		
		Men.	Women.	Total.
July 1, 1894.....	860	149,709	7,488	157,197
July 1, 1895.....	927	170,129	10,102	180,231
October 31, 1896.....	962	(a)	(a)	170,296
September 30, 1897.....	1,009	162,690	5,764	168,454
September 30, 1898.....	1,087	163,562	7,505	171,067
September 30, 1899.....	1,320	200,932	8,088	209,020
September 30, 1900.....	1,635	233,553	11,828	245,331
September 30, 1901.....	1,871	261,523	14,618	276,141
September 30, 1902.....	2,229	313,592	15,509	329,101
September 30, 1903.....	2,583	380,845	14,753	395,598
September 30, 1904.....	2,504	378,859	12,817	391,676

a Not separately reported.

From the above it is seen that organized labor in New York failed to increase in numerical strength for the first time since 1897. Of the 2,504 trade unions in existence on September 30, 1904, 670 were located in New York City and 1,834 in other cities of the State, while of the 391,676 members, 254,719 belonged to New York City unions and 136,957 to unions in other places. The female members in all trade unions numbered 12,817, of whom 6,516 were in unions in the clothing and textile industries, 2,952 in unions in the tobacco industry, and 1,059 in unions in the printing, binding, etc., industry.

The membership of trade unions, by industries, on July 1 for the years 1894 and 1895, on October 31 for the year 1896, and on September 30 for the years 1897 to 1904 is shown in the table following:

MEMBERSHIP OF TRADE UNIONS, BY INDUSTRIES, 1894 TO 1904.

Industry.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Building, stoneworking, etc.....	49,056	53,613	56,294	53,273	59,641	71,067	80,441	85,401	91,184	110,457	119,888
Clothing and textiles.....	39,162	51,921	30,093	32,147	26,433	29,714	28,866	41,883	46,984	40,981	36,090
Metals, machinery, and shipbuilding.....	9,860	11,376	13,010	13,991	16,236	24,014	31,271	35,562	51,749	48,230	36,971
Transportation.....	18,197	18,191	23,031	23,014	18,090	24,668	30,854	34,371	36,901	61,749	71,859
Printing, binding, etc.....	11,059	11,998	13,848	13,313	15,045	16,023	17,117	17,986	21,110	23,845	25,278
Tobacco.....	8,722	9,089	9,799	9,097	8,889	8,886	12,349	10,210	11,633	12,435	12,354
Food and liquors.....	5,661	6,541	7,503	6,995	6,812	8,391	9,430	9,451	13,371	19,246	18,833
Theaters and music.....	5,688	7,327	7,306	6,920	9,346	9,518	9,698	11,688	11,588	11,674	13,614
Woodworking and furniture.....	5,329	4,652	4,218	4,205	4,584	6,683	8,176	8,260	11,823	17,126	13,001
Restaurants and retail trade.....	1,243	1,529	2,087	1,843	2,174	3,207	5,303	6,804	8,503	10,942	9,723
Public employment.....	1,964	1,964	993	1,667	1,880	3,727	7,148	8,142	9,160	9,753	9,538
Miscellaneous.....	1,256	2,030	2,114	1,989	1,937	3,122	4,728	6,383	15,095	29,160	24,527
Total.....	157,197	180,231	170,296	168,454	171,067	209,020	245,381	276,141	329,101	395,598	391,676

The number and membership of trade unions, by industries, for New York City and the State exclusive of New York City, on September 30, 1904, is shown in the following table:

NUMBER AND MEMBERSHIP OF TRADE UNIONS, BY INDUSTRIES, SEPTEMBER 30, 1904.

Industry.	Number of unions in—			Membership of unions in—		
	New York City.	Other localities.	The State.	New York City.	Other localities.	The State.
Building, stoneworking, etc.....	197	484	681	89,052	30,836	119,888
Transportation.....	72	300	372	34,977	36,882	71,859
Clothing and textiles.....	69	99	168	26,758	9,332	36,090
Metals, machinery, and shipbuilding.....	91	232	323	17,170	19,801	36,971
Printing, binding, etc.....	35	83	118	20,614	4,664	25,278
Woodworking and furniture.....	42	50	92	10,412	2,589	13,001
Food and liquors.....	46	100	146	13,845	4,988	18,833
Theaters and music.....	11	44	55	10,202	3,412	13,614
Tobacco.....	15	52	67	8,363	3,991	12,354
Restaurants and retail trade.....	11	94	105	3,655	6,068	9,723
Public employment.....	27	90	117	7,647	1,891	9,538
Stationary engine tending.....	29	68	97	8,176	4,526	12,702
Miscellaneous.....	25	138	163	3,848	7,977	11,825
Total.....	670	1,834	2,504	254,719	136,957	391,676

THE STATE OF EMPLOYMENT.—This chapter brings out the proportion of members of representative trade unions in the various industries not at work at the end of each month during 1904 and the causes of idleness. From the returns it appears that the state of employment was much less favorable thruout 1904 than in 1902. Compared with 1903, the conditions do not appear so unfavorable; but this is due to the exceptional amount of idleness produced in the summer of 1903 by the extensive disputes in the building trades of New York City. Were the building trades excluded, it would be found that the proportion of unemployed members of workingmen's unions in 1904 exceeded that of 1903 for each of the first nine months, excepting

August. It was during the last three months of the year only that the relative amount of idleness was smaller in 1904 than in 1903. The mean proportion of idle members for 1904 was 16.9, as compared with 17.5 for 1903 and 14.8 for 1902.

The number of members of trade unions idle, by causes of idleness, at two periods (end of March and end of September) during the years 1903 and 1904 is shown in the table below:

MEMBERS OF TRADE UNIONS IDLE, BY CAUSES OF IDLENESS, IN 1903 AND 1904.

Cause of idleness.	End of March, 1903.		End of September, 1903.		End of March, 1904.		End of September, 1904.	
	Number idle.	Per cent.	Number idle.	Per cent.	Number idle.	Per cent.	Number idle.	Per cent.
Lack of work.....	23,997	57.2	18,528	53.9	34,685	33.4	21,718	58.1
The weather.....	8,550	20.4	677	2.0	36,600	35.2	968	2.6
Strike or lockout.....	4,470	10.7	10,153	29.5	25,723	24.7	10,593	28.3
Lack of material.....	534	1.3	852	2.5	1,213	1.2	952	2.5
Disability.....	3,344	8.0	1,993	5.8	3,898	3.7	1,873	5.0
Other reasons.....	905	2.1	2,010	5.8	1,573	1.5	1,140	3.1
Reason not stated.....	141	.3	157	.5	303	.3	136	.4
Total.....	41,941	100.0	34,370	100.0	103,995	100.0	37,380	100.0

Of the various industries, at the end of March, 1904, there were 60,361 members of trade unions idle in building, stoneworking, etc., 13,318 in transportation, 9,601 in clothing and textiles, 5,232 in metals, machinery, etc., 4,136 in printing, binding, etc., and 3,174 in woodworking. At the end of September, 1904, there were 11,674 members idle in building, stoneworking, etc., 6,500 in transportation, 5,521 in clothing and textiles, 4,213 in metals, machinery, etc., 1,880 in printing, binding, etc., and 2,243 in woodworking.

WAGES AND EARNINGS.—This chapter presents changes in rates of wages and the number of working people affected by these changes as reported by manufacturers and by members of labor organizations, together with the average daily and average quarterly earnings of members of labor organizations. During the twelve months ending September 30, 1904, 19,182 members of trade unions received an increase of wages averaging \$1.59 a week for each member affected, while 1,102 sustained a decrease in weekly wages averaging \$2.30 each. All the changes together, however, were equivalent to an average net increase of \$1.38 per week per member. In addition to the trade union reports, incomplete returns from manufacturers showed changes affecting 562 employees. All these received increases, which averaged \$1.28 per week per person. Less than one-third as many workmen received advances in 1904 as in 1903, the average advance was lower, and about three times as many suffered reductions which averaged much greater than those of 1903. Comparing the total number affected by changes with the union membership in the State at the middle of each year, it was found that 34 per cent of the unionists in the State were affected by changes in 1902, 18 per cent in 1903, and 5 per cent in 1904, which resulted in average net weekly increases of \$1.68, \$1.79, and \$1.38, respectively.

The average earnings of the organized men and women, by industries, for six months of 1904, are set forth in the following table:

AVERAGE EARNINGS OF ORGANIZED WORKING PEOPLE, BY INDUSTRIES, FOR SIX MONTHS OF 1904.

Industry.	Average earnings of men, 1904.			Average earnings of women, 1904.		
	First quarter.	Third quarter.	Six months.	First quarter.	Third quarter.	Six months.
Building, stoneworking, etc.....	\$161. 41	\$213. 41	\$374. 82	.....	.....	.....
Transportation.....	182. 79	188. 95	371. 74	\$122. 20	\$120. 88	\$243. 08
Clothing and textiles.....	139. 58	130. 76	270. 34	85. 72	62. 05	147. 77
Metals, machinery, etc.....	191. 48	202. 90	394. 38	64. 55	56. 24	120. 79
Printing, binding, etc.....	221. 11	222. 06	443. 17	108. 09	117. 63	225. 72
Woodworking and furniture.....	174. 22	171. 69	345. 91	73. 09	73. 86	146. 95
Food and liquors.....	168. 05	181. 76	349. 81	76. 70	90. 25	166. 95
Theaters and music.....	295. 99	291. 16	587. 15	421. 30	375. 57	796. 87
Tobacco.....	132. 95	136. 46	269. 41	99. 84	112. 68	212. 52
Restaurants and retail trade.....	157. 74	168. 32	326. 06	82. 56	94. 89	177. 39
Public employment.....	211. 33	215. 04	426. 37	140. 03	160. 65	300. 68
Stationary engine tending.....	212. 50	225. 06	437. 56	.....	.....	.....
Miscellaneous.....	150. 85	152. 49	303. 34	72. 64	79. 43	152. 07
All industries.....	175. 62	195. 58	371. 20	122. 78	113. 30	236. 08

CHANGES IN HOURS OF LABOR.—During the year ending September 30, 1904, the labor unions reported changes in the normal working time of 6,962 organized wage-earners. The changes were mostly in the nature of reductions in the weekly hours of labor, but there were some cases of an increase. An average reduction of 5.5 hours was made in the weekly schedule affecting 6,896 working people, while 66 workmen had their weekly schedule increased by an average of 26.1 hours. The number affected by reductions in 1904 was much smaller than in any one of the preceding three years, the number being 26,147 in 1901, 61,853 in 1902, and 21,636 in 1903.

The following table shows, by industries, the changes in hours per week and the number of organized workers affected:

CHANGES IN WEEKLY HOURS OF LABOR OF MEMBERS OF LABOR ORGANIZATIONS AND MEMBERS AFFECTED, AS REPORTED BY LABOR UNIONS FOR THE YEAR ENDING SEPTEMBER 30, 1904.

Industry.	Decrease per week.			Increase per week.			Net change per week.		
	Mem- bers af- fected.	Total hours.	Aver- age hours.	Mem- bers af- fected.	Total hours.	Aver- age hours.	Mem- bers af- fected.	Total de- crease of hours.	Aver- age de- crease of hours.
Building, etc.....	1,065	4,978	4.7	60	1,680	28.0	1,125	3,298	2.9
Transportation.....	1,563	14,624	9.4	6	42	7.0	1,569	14,582	9.3
Clothing and textiles.....	260	1,410	5.4	.....	.....	.....	260	1,410	5.4
Metals, machinery, etc.....	346	1,579	4.6	.....	.....	.....	346	1,579	4.6
Printing.....	1,704	3,326½	2.0	.....	.....	.....	1,704	3,326½	2.0
Woodworking.....	76	456	6.0	.....	.....	.....	76	456	6.0
Food and liquors.....	340	2,846	8.4	.....	.....	.....	340	2,846	8.4
Restaurants and retail trade.....	175	1,050	6.0	.....	.....	.....	175	1,050	6.0
Stationary engine tending...	125	2,925	23.4	.....	.....	.....	125	2,925	23.4
Miscellaneous.....	1,242	4,864	3.9	.....	.....	.....	1,242	4,864	3.9
Total.....	6,896	38,058½	5.5	66	1,722	26.1	6,962	36,336½	5.2

Of the 1,065 workers in the building trades that secured a shorter workday, 374 won the eight-hour day, while all of the others, with the eight-hour day already won, established in addition the Saturday half holiday. In 1904 the total number of union workers who secured the eight-hour day was 1,155, as compared with 5,833 in 1903.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

AUSTRIA.

Bleivergiftungen in Hüttenmännischen und Gewerblichen Betrieben. Ursachen und Bekämpfung. K. K. Arbeitsstatistisches Amt im Handelsministerium. I. Teil. Bericht über Erhebungen in Blei- und Zinkhütten. 1905. viii, 51 pp.

This report presents the results of an investigation into the labor conditions in Austrian lead and zinc works, with special reference to the causes producing lead poisoning and the means of preventing such poisoning. The investigation was conducted in 1904, by a commission composed of representatives of the ministry of commerce, the ministry of agriculture, and a number of medical experts. It was undertaken in consequence of resolutions adopted by the International Workingmen's Protective Union at its conventions held at Cologne in 1902 and at Basle in 1904, and in consequence of an interpellation of a member of the Lower House of the Austrian Parliament March 26, 1903, regarding the question of collecting data which might form a basis for the enactment of special measures for the hygienic protection of workingmen employed in lead works.

The report covers nine establishments and is based upon the observations of the commission thru personal inspection of the works. It is accompanied by 32 photographic views and 9 diagrams, illustrating buildings, sections of plants, various operations in the smelting processes, dining and wash rooms, and sleeping rooms for unmarried employees.

The data collected show for each establishment the character and quantity of the product, the number and occupations of employees, the hours of labor, wages, the conditions governing employment, the location of the plant, with a description of its surroundings, an account of the various operations in smelting, the sanitary arrangements of the plant, and the sanitary condition of the employees.

The following data relate to the imperial smelting works located at Příbram in Bohemia, which is the largest and most important of the nine establishments visited by the commission, employing over 50 per cent of the total number of persons in the establishments investigated.

The total number of male employees on April 15, 1904, exclusive of engineers and firemen, was 460. Of this number 101 had been employed at the works 5 years or less, 98 between 5 and 10 years, 148 between 10 and 20 years, 104 between 20 and 30 years, and 9 over 30 years. From this it appears that 43 per cent had been employed at the works less than 10 years, and 57 per cent 10 years or over.

The hours of labor vary according to the character of the work. Calciners, mixers, chargers, and all others engaged in the direct operations of smelting and refining, work in shifts of 8 hours each; for blacksmiths, masons, carpenters, and day laborers the shift is eleven hours, including one hour intermission at noon; all other employees, as crushers, preparers, engineers, and firemen, work in 12-hour shifts, including an intermission of 2 hours.

Applicants for permanent employment must be at least 14 and not over 40 years of age, and must pass a physical examination conducted by the physician who is connected with the establishment. Young persons are first employed as messenger boys, helpers, blacksmiths' apprentices, or in other occupations not injurious to their health or which might retard their physical development.

Females are employed as day laborers in separating slag and in removing cinders, or as masons' helpers, charwomen, etc. The number of these is not large, being 21 out of a total of 499 employees on December 31, 1903.

All employees are members of the Miners' Provident Association, which provides for the payment of sick and funeral benefits, invalidity pension, and widows' and orphans' relief benefits.

The majority of employees live in the immediate vicinity of the works. Many of them own their homes, for the acquisition of which loans were advanced to them by the Miners' Provident Association.

A bath house for the use of employees is supplied with a continuous flow of warm water, and affords facilities for thoro cleansing after each shift.

During the summer months the bath is used daily by about 30 men, on Saturdays usually by about 100 men. Adjacent to the bath house are two smaller buildings furnished with bath tubs and vapor baths, mainly for the use of foremen.

For the purpose of affording first relief in cases of accident, a small building, consisting of two rooms and furnished with the necessary appliances, has been set apart by the establishment in conformity with the regulations prescribed by the ministry of agriculture, and 30 men have been instructed for this service by the physician.

The following table presents statistics of sickness which occurred among the members of the Miners' Provident Association of Příbram during the years 1894 to 1903:

STATISTICS OF SICKNESS AMONG EMPLOYEES IN THE MINES AND LEAD WORKS AT
PŘIBRAM, BOHEMIA, FOR EACH YEAR, 1894 TO 1903.

MINE EMPLOYEES.

Year.	Number of employees.	Lead colic.		Chronic catarrh of the stomach.		Habitual constipation.		All cases of sickness.			
		Number of cases.	Days of sickness.	Number of cases.	Days of sickness.	Number of cases.	Days of sickness.	Number of cases.	Per cent of employees. (a)	Days of sickness.	Average days of sickness per employee. (a)
1894.....	4,856	.....	.....	51	996	3	98	3,061	63.0	52,809	10.9
1895.....	4,681	.....	.....	43	486	10	135	2,684	57.3	40,188	8.6
1896.....	4,503	.....	.....	27	1,020	.....	.....	2,263	50.3	39,802	8.8
1897.....	4,306	.....	.....	22	538	19	198	1,787	41.5	33,821	7.9
1898.....	4,181	.....	.....	33	1,213	9	74	1,870	44.7	32,922	7.9
1899.....	4,057	.....	.....	47	931	6	45	2,064	50.9	36,892	9.1
1900.....	3,938	.....	.....	51	1,193	3	116	2,042	51.9	35,981	9.1
1901.....	3,610	.....	.....	25	507	11	93	1,891	52.4	31,835	8.8
1902.....	3,693	.....	.....	46	687	2	43	1,554	42.1	26,600	7.2
1903.....	3,593	.....	.....	32	690	11	95	1,545	43.0	30,036	8.4
Average	4,141.8	.....	.....	37.7	826.1	7.4	89.7	2,076.1	50.1	36,088.6	8.7

EMPLOYEES IN WORKS.

1894.....	357	22	500	22	342	18	195	483	135.3	6,288	17.6
1895.....	365	20	227	9	87	28	219	492	134.8	5,025	13.8
1896.....	395	22	434	4	85	13	154	319	80.8	5,568	14.1
1897.....	462	8	146	5	112	12	184	310	67.1	5,258	11.4
1898.....	465	9	166	15	410	16	292	300	64.5	5,249	11.3
1899.....	452	12	225	12	222	14	198	275	60.8	5,324	11.8
1900.....	448	9	236	11	224	7	165	242	54.0	4,565	10.2
1901.....	465	12	250	15	255	9	97	321	69.0	5,666	12.2
1902.....	470	9	214	17	290	11	252	285	60.6	5,921	12.6
1903.....	475	6	161	14	270	19	145	300	63.2	5,673	11.9
Average	435.4	12.9	255.9	12.4	229.7	14.7	190.1	332.7	76.4	5,453.7	12.5

^a Computed.

From a comparison of the two principal groups of employees presented in the foregoing table, it will be seen that in both the percentage of employees affected and in the number of days of illness these items for the employees in the works exceed by approximately 50 per cent the numbers reported for those in the mines. Lead colic, for instance, occurred among the employees in the smelting works only. Since the housing and other conditions of living are practically the same for the two groups, the conclusion is inevitable that the differences are caused by the nature of the work.

When compared with 1894, the condition of the employees with reference to sickness shows a general improvement during the later years and especially in the case of lead colic, the number of cases having decreased from 22 in 1894 to 6 in 1903 and the number of days of sickness in the same period from 500 to 161. These results are, of course, due to greater attention to sanitary conditions in the various departments. These consist in the use of water for sprinkling in cer-

tain departments, the wearing of gloves, respirators, and special working garments. The men are not fully impressed with the importance of wearing either gloves or respirators, however, and the exertion is so violent and the dust so penetrating in some rooms that the use of respirators is actually burdensome. The stained work garments of one shift were also to be seen hanging in contact with the street clothing of the men engaged in the succeeding shift. Further danger arises from failure to enforce the State regulation forbidding the eating of food in a dust-laden atmosphere. Other remedial devices are ventilating shafts, air and dust chambers, and mantles, hoods, etc., for the carrying off of the lead vapors and dust. Much room for improvement in these respects remains, however, as appears from analyses of the air in various departments, which was found to contain lead oxide in proportions varying from 0.3 or 0.4 milligram to 4.5 milligrams in 28 liters of air, while dust collected from window sills or other projections from the walls was found to contain from 14 per cent to 55.2 per cent of the same substance. Apart from the annual cleaning out of the dust chambers, air ways, and condensing apparatus, which requires from two to three weeks at the beginning of the year, one of the most dangerous occupations is that of sifting and sorting the various kinds of commercial litharge. In this work continuous employment would be impossible, and the employees are required to engage in it for only five or six days in succession, after which a period of eighteen or twenty months is allowed to intervene before the same persons are again assigned thereto.

The following table shows the number of deaths occurring among workmen, the number going on the invalid list, and the number of deaths among invalidated employees for each year from 1894 to 1903, inclusive, with average age:

NUMBER OF DEATHS AMONG EMPLOYEES, NUMBER TRANSFERRED TO INVALID LIST, AND NUMBER OF INVALIDED EMPLOYEES DYING AT THE LEAD MINES AND WORKS, PŘIBRAM, BOHEMIA, WITH AVERAGE AGE, FOR EACH YEAR, 1894 TO 1903.

MINE EMPLOYEES.

Year.	Number of employees.	Employees dying.			Employees transferred to invalid list.		Separations from service by death and invalidity.		Invalided employees dying.	
		Number.	Average age.	Rate per thousand employees. (<i>a</i>)	Number.	Average age.	Number.	Per cent of employees. (<i>a</i>)	Number.	Average age.
1894.....	4,856	50	38.6	10.3	80	50.5	130	2.68	53	63.2
1895.....	4,681	31	46.6	6.6	80	50.2	111	2.37	58	59.2
1896.....	4,503	44	42.1	9.8	93	51.1	137	3.04	54	62.9
1897.....	4,306	41	41.4	9.5	81	51.9	122	2.83	45	60.7
1898.....	4,181	28	41.5	6.7	106	53.2	134	3.20	53	65.2
1899.....	4,057	32	39.3	7.9	107	50.6	139	3.43	67	64.4
1900.....	3,938	33	43.9	8.4	88	50.1	121	3.07	58	62.4
1901.....	3,610	33	44.9	9.1	86	50.2	119	3.30	58	61.1
1902.....	3,693	31	45.1	8.4	78	52.3	109	2.95	63	63.3
1903.....	3,593	36	45.0	10.0	62	49.5	98	2.73	67	60.1
Average	4,141.8	^b 36.5	41.4	8.8	86.1	51.0	122.0	2.95	57.6	62.3

^a Computed.

^b This average is not derivable from the items given, but accords with total as given in the report.

NUMBER OF DEATHS AMONG EMPLOYEES, NUMBER TRANSFERRED TO INVALID LIST, AND NUMBER OF INVALIDED EMPLOYEES DYING AT THE LEAD MINES AND WORKS, PŘIBRAM, BOHEMIA, WITH AVERAGE AGE, FOR EACH YEAR, 1894 TO 1903—
Concluded.

EMPLOYEES IN WORKS.

Year.	Number of employees.	Employees dying.			Employees transferred to invalid list.		Separations from service by death and invalidity.		Invalided employees dying.	
		Num-ber.	Aver-age age.	Rate per thousand employ-ees. (a)	Num-ber.	Aver-age age.	Num-ber.	Per cent of em-ployees. (a)	Num-ber.	Average age.
1894.....	357	3	41.0	8.4	18	49.0	21	5.88	6	57.2
1895.....	365	4	34.7	11.0	13	50.3	17	4.66	8	53.9
1896.....	395	3	40.8	7.6	8	51.0	11	2.78	4	55.4
1897.....	462	2	45.7	4.3	10	51.2	12	2.60	4	58.9
1898.....	465	3	44.3	6.5	4	43.8	7	1.51	.....	.....
1899.....	452	1	54.5	2.2	8	51.6	9	1.99	6	57.4
1900.....	448	1	62.7	2.2	9	53.2	10	2.23	5	65.9
1901.....	465	4	37.9	8.6	8	42.3	12	2.58	11	53.6
1902.....	470	4	37.1	8.5	11	49.4	15	3.19	7	56.6
1903.....	475	.....	.....	.....	8	44.5	8	1.68	7	59.9
Average	435.4	2.5	41.0	5.7	9.7	49.1	12.2	2.80	5.8	57.1

^a Computed.

No very considerable improvement in conditions can be predicated on the death rates and the percentages of separation from service, tho some gain is apparent from a consideration of the latter data for employees in the lead works in recent years. The average age of mine employees dying or transferred to the invalid list is somewhat greater than that of the employees in the works, tho the percentage of total separations is lower for the latter than for the former group of employees.

Data for other establishments are given with less completeness than for that at Příbram. It may be noted that at the mine and works at Raibl, in Carinthia, 7 cases of lead poisoning were reported for the four years 1894 to 1897, while for the six succeeding years there were none. At Gailitz, also, none have been reported since 1899. Two of the cases at Raibl were among miners. It is stated as a reason for the infrequency of this complaint among the smelters at Raibl that they have an interval of twenty-four hours between shifts, much of which is spent at field work in the open air, thus allowing opportunity for the elimination of the poison from the system.

Some of the establishments had more effective ventilating systems than were in use at Příbram, as well as more elaborate sanitary regulations. At the works at Scheriau, in Lower Carinthia, for instance, the workrooms are sprinkled freely every day; eating and drinking in the workrooms, as well as the smoking and chewing of tobacco, are forbidden; mouth and hands must be carefully cleansed before eating or drinking; clothing must be changed before and after work, and the body thoroly cleansed at the close of a shift. Sponges moistened with vinegar are required to be worn while cleaning out the dust

chambers and shafts. Abstinence from acid foods and liquors is prescribed, and the use of fatty foods, and particularly of milk, is recommended.

The American type of furnaces is in use here, and so thoro is the ventilation that three analyses of the air in the immediate vicinity of the workmen attending to the roasting process showed a content of lead oxide of only 0.2 to 0.3 milligram in 250 liters of air. These regulations and devices were of too recent adoption for the results to be reported statistically, but at Gailitz, where much the same methods have been longer used, it is said that severe cases of lead poisoning have disappeared. An important factor in this improvement is believed to be the alternate days of agricultural labor, during which the body rids itself of the absorbed poison.

The following table gives statistics of sickness which occurred among the employees at the zinc works located at Cilli, Styria, for each year, 1898 to 1902. The principal product of this establishment is zinc, with considerable quantities of lead as one of the by-products. It is the second largest of the establishments investigated by the commission.

STATISTICS OF SICKNESS AMONG EMPLOYEES IN THE ZINC WORKS AT CILLI, STYRIA,
FOR EACH YEAR, 1898 TO 1902.

SMELTERS AND SMELTERS' HELPERS.

Year.	Number of employees.	Catarrh of the stomach.		Rheumatism.		All cases of sickness. ^(a)			
		Number of cases.	Days of sickness.	Number of cases.	Days of sickness.	Number of cases.	Per cent of employees. ^(b)	Days of sickness.	Average days of sickness per employee. ^(b)
1898.....	48	4	45	17	152	60	125.0	884	18.4
1899.....	54	2	80	15	226	48	88.9	816	15.1
1900.....	60	4	48	20	234	62	103.3	714	11.9
1901.....	60	1	8	32	511	77	128.3	1,077	18.0
1902.....	60	7	63	15	131	46	76.7	517	8.6
Average.....	56.4	3.6	48.8	19.8	250.8	58.6	103.9	801.6	14.2

ALL OTHER EMPLOYEES.

1898.....	145	5	39	21	232	103	71.0	1,615	11.1
1899.....	157	6	116	24	307	91	58.0	1,556	9.9
1900.....	172	11	160	43	511	131	76.2	2,140	12.4
1901.....	177	7	71	51	783	150	84.7	2,540	14.4
1902.....	172	2	15	39	413	95	55.2	1,177	6.8
Average.....	164.6	6.0	80.2	35.6	449.2	114.0	69.3	1,805.6	11.0

^a No cases of lead colic reported.

^b Computed.

The Miners' Provident Association in Miess-Schwarzenbach, Lower Carinthia, embracing the employees in the lead mines and smelting works of this locality, and the third largest of the establishments investigated by the commission, reported cases of sickness among

their members for each year, 1894 to 1903, as shown in the following table:

STATISTICS OF SICKNESS AMONG EMPLOYEES IN LEAD MINES AND SMELTING WORKS AT MIESS-SCHWARZENBACH, LOWER CARINTHIA, FOR EACH YEAR, 1894 TO 1903.

SMELTERS.

Year.	Average number of employees.	Lead colic.		Catarrh of the stomach.		Intestinal catarrh.		Habitual constipation.		All cases of sickness.			
		Number of cases.	Days of sickness.	Number of cases.	Days of sickness.	Number of cases.	Days of sickness.	Number of cases.	Days of sickness.	Number of cases.	Per cent of employees. (a)	Days of sickness.	Average days of sickness per employee. (a)
1894...	11	.....	.....	7	51	1	7	1	22	7	63.6	194	17.6
1895...	15	.....	.....	1	3	1	4	.....	.....	15	100.0	131	8.7
1896...	21	.....	.....	1	5	.....	.....	1	4	14	66.7	99	4.7
1897...	26	.....	.....	1	5	.....	.....	3	16	27	103.8	307	11.8
1898...	29	.....	.....	.....	.....	2	14	2	18	18	62.1	180	6.2
1899...	44	.....	.....	.....	.....	.....	.....	2	10	26	59.1	283	6.4
1900...	71	7	67	1	14	7	70	1	5	38	53.5	400	5.6
1901...	58	.....	.....	34	324	21	179	.....	.....	30	51.7	265	4.6
1902...	48	.....	.....	32	285	8	57	2	11	145	302.1	1,190	24.8
1903...	61	18	180	.....	.....	.....	.....	.....	.....	129	211.5	1,375	22.5
Av. (a)	38.4	2.5	24.7	8.6	76.6	4.0	33.1	1.2	8.6	44.9	116.7	442.4	11.5

ALL OTHER EMPLOYEES, INCLUDING MINE WORKERS.

1894...	297	.....	.....	21	277	2	40	.....	.....	184	62.0	2,689	9.1
1895...	321	.....	.....	20	228	10	121	4	25	174	54.2	2,103	6.6
1896...	384	.....	.....	25	326	6	85	7	62	268	69.8	3,236	8.4
1897...	469	.....	.....	15	162	8	73	6	63	272	58.0	4,350	9.3
1898...	505	.....	.....	24	357	8	92	6	82	351	69.5	5,297	10.5
1899...	503	.....	.....	37	503	25	376	10	91	506	100.6	7,564	15.0
1900...	566	3	53	19	266	11	83	.....	.....	460	81.3	7,000	12.4
1901...	704	.....	.....	60	545	6	50	1	7	496	70.5	6,956	9.9
1902...	845	.....	.....	60	483	18	185	1	4	719	85.1	8,605	10.2
1903...	866	1	7	65	439	16	139	3	16	766	88.5	8,867	10.2
Av. (a)	546.0	0.4	6.0	34.6	358.6	11.0	124.4	3.8	35.0	419.6	76.8	5,666.7	10.4

a Computed.

FRANCE.

Annuaire des Syndicats Professionnels Industriels, Commerciaux et Agricoles Constitués Conformément à la Loi du 21 mars 1884, en France et aux Colonies. Direction du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. 1903, lv, 764 pp.; 1904-5, lviii, 804 pp.

In these volumes are presented the fourteenth and fifteenth annual reports on trade, industrial, commercial, agricultural, and certain professional associations or unions formed in France and her colonies under the law of March 21, 1884.^(a) Local organizations (*syndicats*) and federations of such bodies (*unions des syndicats*), as well as labor exchanges (*bourses du travail*), are reported on. In the first group are included employers' associations; employees' unions; mixt unions,

^a For the provisions of this law see Bulletin No. 25, p. 838.

composed of both employers and employees, and those agricultural associations in which employers and employees are united to form a special type of mixt organization. Agricultural bodies made up exclusively of employers or employees are classed with other industrial organizations under the proper headings. Federations are similarly classified. A directory of these associations, federations, etc., by departments, takes up the main portion of the volumes under consideration. The laws under which these organizations operate are reproduced, together with the related orders, ministerial circulars, and instructions. Current judgments and court decisions on questions connected with the organizations, and lists of the unions, federations, etc., classified under the general trades or industries, are also given. In the report for 1903 is presented a list of the publications of the various bodies.

Summarized data concerning the different classes of organizations are also presented. The following table shows the number of local organizations conforming to the law of 1884 which were in existence on July 1 of each year from 1884 to 1896 and on January 1 of each year from 1898 to 1905, inclusive, and the increase in numbers from year to year:

INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ASSOCIATIONS IN EXISTENCE ON JULY 1 OF EACH YEAR, 1884 TO 1896, AND ON JANUARY 1 OF EACH YEAR, 1898 TO 1905.

[Under "Industrial, commercial, etc., associations" are included trade and professional associations and those agricultural associations which are composed of employers and employees separately.]

Date.	Industrial, commercial, etc., associations.			Agricultural associations (mixt).	Total.	Increase over preceding year.
	Em- ployers'.	Em- ployees'.	Mixt.			
July 1, 1884.....	101	68	1	5	175	.....
July 1, 1885.....	285	221	4	39	549	374
July 1, 1886.....	359	280	8	93	740	191
July 1, 1887.....	598	501	45	214	1,358	618
July 1, 1888.....	859	725	78	461	2,123	765
July 1, 1889.....	877	821	69	557	2,324	201
July 1, 1890.....	1,004	1,006	97	648	2,755	431
July 1, 1891.....	1,127	1,250	126	750	3,253	498
July 1, 1892.....	1,212	1,589	147	863	3,811	558
July 1, 1893.....	1,397	1,926	173	952	4,448	637
July 1, 1894.....	1,518	2,178	177	1,092	4,965	517
July 1, 1895.....	1,622	2,163	173	1,188	5,146	181
July 1, 1896.....	1,731	2,243	170	1,275	5,419	273
January 1, 1898.....	1,894	2,324	184	1,499	5,901	482
January 1, 1899.....	1,965	2,361	175	1,824	6,325	424
January 1, 1900.....	2,157	2,685	170	2,069	7,081	756
January 1, 1901.....	2,382	3,287	162	2,204	8,035	954
January 1, 1902.....	2,609	3,679	155	2,375	8,818	783
January 1, 1903.....	2,757	3,934	156	2,433	9,280	462
January 1, 1904.....	2,947	4,227	153	2,592	9,919	639
January 1, 1905.....	3,102	4,625	144	3,116	10,987	1,068

The increase in the total number of organizations has been constant, but far greater during the last five years than for any similar period since the enactment of the law. The number of employers' associations has had a steady growth, as have the organizations of employees, with the exception of one year. Since 1890 the number

of organizations of the latter class has exceeded that of the former. Mixt associations, except of persons engaged in agricultural pursuits, have shown a marked falling off since 1898, while the second and fourth groups shown in the table have practically doubled in numbers within the same period.

The total membership of these organizations for each year, and the annual increase, are shown in the following table:

MEMBERSHIP OF INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ASSOCIATIONS ON JULY 1 OF EACH YEAR, 1890 TO 1896, AND ON JANUARY 1 OF EACH YEAR, 1898 TO 1905.

Date.	Membership of associations.					Increase over preceding year.
	Em- ployers'.	Em- ployees'.	Mixt.	Agricul- tural (mixt).	Total.	
July 1, 1890.....	93,411	139,692	14,096	234,234	481,433	-----
July 1, 1891.....	106,157	205,152	15,773	269,298	596,380	114,947
July 1, 1892.....	102,549	288,770	18,561	313,800	723,680	127,300
July 1, 1893.....	114,176	402,125	30,052	353,883	900,236	176,556
July 1, 1894.....	121,914	403,440	29,124	378,750	933,228	32,992
July 1, 1895.....	131,031	419,781	31,126	403,261	985,199	51,971
July 1, 1896.....	141,877	422,777	30,333	423,492	1,018,479	33,280
January 1, 1898.....	189,514	437,793	33,963	448,395	1,109,665	91,186
January 1, 1899.....	151,624	419,761	34,236	491,692	1,097,313	^a 12,352
January 1, 1900.....	158,300	491,647	28,519	512,794	1,191,260	93,947
January 1, 1901.....	170,030	588,832	29,044	533,454	1,321,360	130,100
January 1, 1902.....	185,099	614,173	34,446	592,613	1,426,331	104,971
January 1, 1903.....	205,463	643,757	33,431	598,834	1,481,485	55,154
January 1, 1904.....	236,830	715,576	35,984	620,048	1,608,438	126,953
January 1, 1905.....	252,036	781,344	25,863	659,953	1,719,196	110,758

^a Decrease.

✓ The number of female members on January 1, 1905, was 92,722, of whom 6,988 belonged to employers' associations, 69,405 to those of employees only, and 6,238 to mixt bodies. The number belonging to agricultural associations was 10,091.

In the following table are presented by groups of industries the number of employers' and employees' associations, the membership of each class, and the percentage which such membership forms of the total number of persons engaged in the industrial groups named. The comparisons are based on the returns of the latest industrial census.

The number of federations, of associations federated, and the total membership of such federations on January 1 of each year for the five-year period, 1901 to 1905, are shown in the following table:

FEDERATIONS OF INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ASSOCIATIONS
IN EXISTENCE ON JANUARY 1 OF EACH YEAR, 1901 TO 1905.

Items.	Industrial, commercial, etc., organizations.			Agricultural organizations.	Total.	Increase over preceding year.
	Em- ployers'.	Em- ployees'.	Mixt.			
Federations:						
1901.....	60	95	9	38	202	29
1902.....	71	120	9	36	236	34
1903.....	78	138	14	43	273	37
1904.....	95	156	8	43	302	29
1905.....	97	158	10	47	312	10
Associations federated:						
1901.....	1,060	1,533	43	1,481	4,117	616
1902.....	1,286	2,010	50	1,720	5,066	949
1903.....	1,434	2,236	49	2,433	6,152	1,086
1904.....	1,687	2,519	34	2,617	6,857	705
1905.....	1,902	3,176	47	3,030	8,155	1,298
Membership of federations:						
1901.....	137,562	533,575	1,829	529,541	1,202,507	173,524
1902.....	134,594	672,422	1,841	539,566	1,348,423	145,916
1903.....	144,494	683,366	1,959	598,834	1,428,653	80,230
1904.....	170,862	590,223	2,753	685,868	1,449,706	21,053
1905.....	186,058	681,863	4,508	725,305	1,597,734	148,028

NUMBER AND MEMBERSHIP OF ORGANIZATIONS IN 1905, BY GROUPS OF INDUSTRIES
AND PER CENT OF MEMBERSHIP OF TOTAL NUMBER ENGAGED IN EACH GROUP.

Industries.	Employers' organizations.			Employees' organizations.		
	Num- ber.	Member- ship.	Per cent of mem- bership of total em- ployers.	Num- ber.	Member- ship.	Per cent of mem- bership of total em- ployees.
Agriculture, forestry, fisheries, and stock raising (a).....	166	27,431	1.14	374	45,014	1.32
Mining.....	5	176	48.48	71	79,277	50.95
Quarrying.....	6	146	2.39	47	7,889	14.18
Food products (manufacture and sale).....	1,042	103,495	23.66	273	40,720	6.77
Chemical products.....	55	4,047	40.21	109	28,175	25.54
Paper, printing and publishing.....	75	4,327	43.42	296	23,857	19.76
Hides and leather.....	81	3,934	8.99	243	27,259	16.12
Textiles proper.....	98	4,671	8.89	379	79,676	12.50
Clothing, cleaning, etc.....	98	5,968	3.85	224	21,572	4.93
Woodworking.....	91	3,319	4.66	324	24,620	10.91
Metal working.....	180	9,484	12.89	558	90,358	15.53
Stone, earthen ware, glass, etc.....	37	1,980	16.92	155	14,302	9.81
Building trades.....	255	18,753	13.85	713	52,480	10.06
Commerce, transportation, and handling.....	465	30,821	22.95	689	221,683	14.33
Domestic and personal service.....	57	5,161	36.63	81	11,042	1.34
Professional (medicine, pharmacy, etc.).....	391	28,323	78.60	89	13,420	8.14
Total.....	3,102	252,036	.....	4,625	781,344	.....

^a Including only those agricultural organizations which are composed of employers only or of employees only.

There were 114 labor exchanges on January 1, 1905, with 2,360 subsidiary organizations, representing a membership of 377,561. Municipal and departmental subsidies were granted during the year to the amount of 309,130 francs (\$59,662). The labor exchanges were successful in securing employment in 91,988 instances.

Auxiliary institutions and undertakings of various kinds were maintained by the different organizations, local and federated, amounting

in all to 6,458 on January 1, 1905. Among these were 1,366 employment offices, 1,412 trade or professional libraries, 929 mutual-relief funds, 718 funds for aiding unemployed members, 695 travel funds, 512 trade schools and courses, besides other forms of relief and insurance funds, cooperative societies, experimental laboratories, museums, etc., and 415 publications issued annually or oftener.

Rapports sur l'Application des Lois Réglementant le Travail en 1904.
Direction du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. 1905. cci, 458 pp.

In this volume are found the summary reports of the members of the superior commission of labor and of the minister of commerce, industry, posts and telegraphs, and the more detailed reports of the division inspectors of labor on the subject of the enforcement of certain laws of France affecting industrial conditions. These laws are three in number and are referred to by the dates of their passage. The law of September 9, 1848, relates to the hours of labor of male adults only; that of June 12, 1893, amended by a law of July 11, 1903, is a general factory-inspection law, and contains provisions for lighting, ventilation, and safety of employees in publicly-owned workshops as well as in those under private control. The act of March 30, 1900, which is in reality an amendment or revision of the law of November 2, 1892, has for its subject-matter the regulation of the employment of women and children in industrial establishments. This last law also controls the hours of labor of adult males at work in establishments where women and children are employed.

The total number of establishments coming within the purview of one or more of these laws in 1904 was 508,849, of which 251,417 employed adult males only, and 257,432 employed either females only or a mixt working force. In 413,269, or 81.2 per cent of the total number of establishments, there were from 1 to 5 employees; 70,222 had from 6 to 20 employees; 20,773 from 21 to 100; 4,136 from 101 to 500; and only 449 had more than 500 employees. Less than 1 per cent, or more exactly, nine-tenths of 1 per cent, of the total number of establishments had more than 100 employees.

The total number of employees in all the establishments considered was 3,662,167, of whom 301,066 were males under 18 years of age, 266,339 females under 18 years of age, 2,293,725 males 18 years of age or over, and 801,037 females 18 years of age or over.

The law of July 11, 1903, so increased the scope of the inspectors' duties by including for the first time a large number of establishments not covered by the former law that the work of inspection was quite incomplete, the total number of visits of inspection being 167,224. Altho the smallest establishments having employees are subject to inspection, home industries are not, when conducted by the father, mother, or guardian, and employing only members of the

family, except where mechanical motors are used or the industry is classed as dangerous or unhealthful. There is found to be a growing abuse of the custom of breaking up the centralized establishment and distributing for home manufacture such materials as are capable of manipulation in this way. The cost of maintaining a shop is avoided, as well as liability to inspection. The solidarity of coemployees, which in factories forms something of a defense against excessively low wages, is also prevented. At the homes excessively long hours are worked in the effort to accomplish without sufficient equipment the required task and so secure further employment, which the contractor can at any time withhold without feeling the loss that would result from an unused plant if he were operating a factory. In one case a central force of 6 or 7 employees was sufficient to give out work in the manufacture of clothing to about 1,500 outside employees.

The employment of children under 13 years of age is prohibited, except that children who have attained the age of 12 years and have a proper medical certificate may be employed, on showing that they have completed a prescribed course of study. The reported violations of this law for the years 1902, 1903, and 1904 were 621, 639, and 511, respectively. More than one-fourth of these were in the brick and tile industry, the next greatest offenders being benevolent institutions of various kinds.

A gradual reduction of the hours of labor from 11 to $10\frac{1}{2}$ and then to 10 per day in establishments employing women and children in whole or in part has been effected under the provisions of the law of March 30, 1900, reaching its goal in the year 1903. The reduction of the hours of labor from $10\frac{1}{2}$ to 10 per day caused less friction than had followed the cutting off of the first half hour, and the ten-hour day is now reported as having been generally accepted. Its adoption is not required where only male adults (18 years of age or over) are employed, however, and some employers have discharged their female and minor employees rather than accept the shortening of the working period. Another practical result mentioned was the extension of the night shift, on which only adult males are employed, so that the total of the hours of operation of the machines is not affected. The violations of the law regulating the hours of labor of women and children numbered 5,357 in 1904, as against 6,121 in 1903. Men were employed for a time in excess of the statutory limit in 2,670 cases in 1904, an increase over the previous year, in which 2,273 cases were reported. Women and children were most frequently worked overtime in the garment-making industries, 1,382 violations being reported. The next highest number was in laundry work, where there were 527 instances.

Night work—i. e., between the hours of 9 p. m. and 5 a. m.—is forbidden, with provisional exceptions, in the cases of females and of minors under 18. The violations of the law have steadily decreased

from 1,534 in 1900 to 813 in 1904. Here, as above, the chief offenders are employers engaged in the clothing industry, 43.4 per cent of all violations having occurred in such employment. This industry also gives rise to the most frequent violations of the law prescribing a weekly day of rest for women and young persons. Adult males are not protected against a demand for continuous labor, tho they are generally allowed one day of rest in seven. Cases are reported where only half the day is allowed, and others where, on account of the law forbidding employment of a mixt force for more than ten hours daily, the adult males are kept at work on Sunday to make up for the time lost during the week.

Accidents to employees are required to be reported to the mayors of the communes, who in turn report to the inspectors. Three classes of accidents are recognized—i. e., those resulting in death, those producing permanent disability, and those producing temporary disability continuing for more than four days. Those producing incapacity for shorter periods are not reported.

The following table shows the number and rate per thousand of accidents occurring in each industrial group, according to their gravity. Mines and quarries are not included therein, since under the French law accidents in these places are not reported to the labor inspectors.

NUMBER OF ACCIDENTS OCCURRING AND RATE PER THOUSAND EMPLOYEES, IN GROUPS OF INDUSTRIES, ACCORDING TO RESULTS, 1904.

Industry.	Acci- dents per 1,000 em- ploy- ees.	Deaths.		Disabilities.				Results unknown.	
				Perma- nent.		Temporary (exceeding four days).			
		Num- ber.	Rate per 1,000.	Num- ber.	Rate per 1,000.	Num- ber.	Rate per 1,000.	Num- ber.	Rate per 1,000.
Fisheries (establishments having an industrial character).....	(a)					92	(a)		
Agriculture and forestry (establishments having an industrial character).....	(a)	88	(a)	162	(a)	2,574	(a)	108	(a)
Extractive industries (other than mining) (b).....	(a)	2	(a)	3	(a)	327	(a)	14	(a)
Food products.....	42.9	100	0.3	209	0.7	12,809	41.1	256	0.8
Chemical industries.....	96.8	52	.5	122	1.1	10,120	93.7	172	1.6
Caoutchouc, paper, and pasteboard.....	50.6	13	.2	116	1.6	3,430	48.1	49	.7
Printing and publishing.....	25.7	5	.1	53	.7	1,975	24.7	21	.3
Textiles.....	22.7	33	.1	414	.7	13,921	21.8	113	.2
Clothing.....	4.6	7	(c)	22	.1	1,659	4.5	33	.1
Straw, feather, and hair goods.....	9.7			4	.2	161	9.0	5	.3
Hides and leather.....	24.7	7	.1	83	.7	2,954	23.6	58	.5
Wood working.....	54.4	81	.3	616	2.2	14,564	50.9	279	1.0
Metallurgy.....	213.1	55	.7	100	1.2	17,174	209.6	137	1.7
Metal working, base.....	97.9	92	.2	788	1.7	44,215	94.8	593	1.3
Metal working, precious.....	16.3	1	.1	8	.4	292	15.3	9	.5
Lapidary work.....	18.4					32	17.3	2	1.1
Stone cutting and polishing.....	50.6	2	.1	18	.9	958	48.5	23	1.1
Earth work and masonry.....	108.9	307	1.2	638	2.4	27,466	103.0	619	2.3
Earthen and stone ware.....	55.9	34	.2	136	.9	8,256	53.9	138	.9
Transportation.....	(a)	374	(a)	513	(a)	32,788	(a)	655	(a)
Commerce and banking.....	35.9	103	.2	196	.5	14,702	34.6	283	.7
Liberal professions.....	(a)	2	(a)	5	(a)	75	(a)	2	(a)
Personal and domestic service.....	(a)	4	(a)	1	(a)	127	(a)	9	(a)
Public service.....	(a)	15	(a)	36	(a)	2,216	(a)	59	(a)

^a Not reported.

^b Including employees of mining companies employed in offices for sale and shipment of product, legal and financial offices, etc., only.

^c Less than five one-hundredths of one per thousand.

The following table shows the number and rate per thousand of accidents reported in the various groups of industries, by sex and age groups:

NUMBER OF ACCIDENTS OCCURRING AND RATE PER THOUSAND EMPLOYEES, IN GROUPS OF INDUSTRIES, BY AGE AND SEX, 1904.

Industry.	Under 18 years of age.						Eighteen years of age or over.					
	Males.			Females.			Males.			Females.		
	Acci- dents	Em- ploy- ees.	Rate per 1,000.	Acci- dents	Em- ploy- ees.	Rate per 1,000.	Acci- dents	Em- ploy- ees.	Rate per 1,000.	Acci- dents	Em- ploy- ees.	Rate per 1,000.
Fisheries (a).....	9	(b)	(b)	.....	.....	.....	79	(b)	(b)	4	(b)	(b)
Agriculture (a).....	163	(b)	(b)	20	(b)	(b)	2,677	(b)	(b)	72	(b)	(b)
Extractive industries (other than min- ing) (c).....	5	(b)	(b)	4	(b)	(b)	334	(b)	(b)	3	(b)	(b)
Food products.....	637	21,484	30	149	10,710	14	11,779	224,213	53	809	55,285	15
Chemical industries ...	222	3,655	61	63	2,260	28	9,631	80,789	119	550	21,386	26
Caoutchouc, paper, and pasteboard.....	372	4,943	75	106	7,148	15	2,800	36,014	78	330	23,230	14
Printing and publish- ing.....	561	12,943	43	48	14,701	3	1,309	47,018	28	136	15,000	9
Textiles.....	1,752	44,776	39	1,053	254,162	4	9,129	256,814	36	2,547	254,778	10
Clothing.....	104	7,471	14	127	202,992	1	1,122	48,551	23	368	209,717	2
Straw, feather, and hair goods.....	15	922	16	23	7,764	3	75	5,662	13	57	8,344	7
Hides and leather.....	293	12,334	24	72	22,820	3	2,456	82,722	30	281	23,715	12
Wood working.....	988	30,770	32	87	19,507	4	14,225	227,659	62	240	21,327	11
Metallurgy.....	1,761	7,301	241	5	532	9	15,676	73,978	212	24	599	40
Metal working, base... Metal working, pre- cious.....	5,793	57,920	100	287	25,788	11	38,835	374,599	103	773	26,077	30
Lapidary work.....	76	2,479	31	14	4,066	3	200	10,801	19	20	4,244	5
Stone cutting and pol- ishing.....	2	163	12	9	497	18	13	1,019	13	10	497	20
Earth work and ma- sonry.....	18	1,400	13	.....	1,088	.....	981	17,101	57	2	1,096	2
Earthen and stone ware.....	925	16,449	56	3	472	6	28,072	249,520	113	30	484	62
Commerce and bank- ing.....	1,187	21,749	55	170	16,712	10	6,929	109,145	63	278	16,724	17
Liberal professions....	604	37,057	16	27	23,126	1	14,247	281,695	51	406	89,383	5
Personal and domes- tic service.....	9	(b)	(b)	.....	.....	.....	73	(b)	(b)	2	(b)	(b)
Public service.....	5	(b)	(b)	5	(b)	(b)	108	(b)	(b)	23	(b)	(b)
	27	(b)	(b)	.....	.....	.....	2,123	(b)	(b)	156	(b)	(b)

^a Establishments having an industrial character.

^b Not reported.

^c Including employees of mining companies employed in offices for sale and shipment of product, legal and financial offices, etc., only.

In the table presented below are given the total number of employees, by sex and age groups, and the distribution of accidents among these groups according to results, during the year 1904:

TOTAL NUMBER OF EMPLOYEES IN INDUSTRIES REPORTING, BY SEX AND AGE GROUPS, AND DISTRIBUTION OF ACCIDENTS BY RESULTS, 1904.

Items.	Under 18 years of age.		Eighteen years of age or over.		Total.
	Males.	Females.	Males.	Females.	
Number of employees.....	301,066	266,339	2,293,725	801,037	3,662,167
Per cent (a).....	8.22	7.27	62.63	21.88	100.00
Number of deaths.....	64	3	1,292	18	1,377
Per cent (a).....	4.65	.22	93.82	1.31	100.00
Number of permanent disabilities.....	330	83	3,654	176	4,243
Per cent (a).....	7.78	1.95	86.12	4.15	100.00
Number of temporary disabilities (above 4 days)...	15,096	2,156	188,750	6,885	212,887
Per cent (a).....	7.09	1.01	88.66	3.24	100.00
Results unknown.....	196	33	3,252	136	3,617
Per cent (a).....	5.42	.91	89.91	3.76	100.00
Total accidents.....	15,686	2,275	196,948	7,215	222,124
Per cent (a).....	7.06	1.02	88.67	3.25	100.00

^a Computed.

From the above table it appears that the proportion of females affected by accidents is far below the proportion of females employed, while for each class of accidents the proportion of adult males injured is much in excess of the proportion employed. In no other case does the percentage of accidents approximate the percentage of employees in the group, except in the classes of disabilities affecting male employees under 18 years of age.

From the report to the mine office, it appears that of the 329,850 persons employed in and about mines and quarries, 31,161 were affected by accidents. The results were: Deaths, 369; permanent disability in 387 cases; temporary disability (exceeding four days) in 29,995 cases, while results were unknown in 410 instances.

GREAT BRITAIN.

Fifteenth Report on Trade Unions in Great Britain and Ireland, 1902, 1903, and 1904. lxxx, 196 pp. (Published by the Labor Department of the British Board of Trade.)

This report presents information relative to the membership, by sex, of all trade unions in the United Kingdom, to membership, classified income and expenditure, and financial condition of 100 principal trade unions, to federations of trade unions, and to trade councils, and is a continuation of the series of reports begun in 1886. Comparative summary tables are given for the ten-year period, 1895 to 1904.

At the end of 1904 there were reported 1,148 trade unions, with a total membership of 1,866,755. The number of trade unions reported at the end of 1901 was 1,239, with a membership of 1,940,874, showing for the three-year period a decrease of 91 in the number of trade unions and of 74,119 in membership. During the period covered by this report 93 unions were formed, 130 were dissolved, and 54 were absorbed or amalgamated with other unions. Of the 1,074 unions which were in existence at the end of 1901 and which remained in existence at the end of 1904, 632 showed a decrease in membership, 393 showed an increase, and 49 reported the same membership. As compared with 1901, with the exception of the textile group of industries, all the main industries show a falling off in membership, being in the metal, engineering, and shipbuilding trades a loss of 0.8 per cent, in mining and quarrying a loss of 5.5 per cent, in transportation a loss of 7 per cent, in the building trades a loss of 9.6 per cent, and in the clothing trades a loss of 11 per cent. Of the minor unions, combined under the head of "other unions," the printing and allied trades had an increase of 7.1 per cent, the unions of employees of public authorities an increase of 23.6 per cent, the shop assistants' unions an increase of 60 per cent, while the general laborers' unions sustained a loss of 15 per cent.

The woodworking, chemical, glass, pottery, leather, food, tobacco, and other miscellaneous trades also sustained losses in union membership.

As compared with 1901, there were increases both in the number of unions including women and girls as members and in the number of such members. At the end of 1901 there were 144 unions with 120,078 female members, and at the end of 1904 there were 148 unions with 125,094 female members. Nearly 90 per cent of the female members were employed in the textile trades, 77.4 per cent being found in the cotton industry alone.

The following tables show the number and membership of trade unions, by groups of industries, for the ten-year period, 1895 to 1904:

NUMBER OF TRADE UNIONS, BY GROUPS OF INDUSTRIES, 1895 TO 1904.

[In this tabulation only those trade unions are considered which furnished returns for all of the ten years included in this period.]

Year.	Build- ing.	Mining and quarry- ing.	Metal, engi- neer- ing, and ship- build- ing.	Textile.	Cloth- ing.	Trans- porta- tion (land and sea).	Print- ing, paper, etc.	Wood- work- ing and fur- nish- ing.	Miscel- lane- ous.	Total.
1895.....	127	92	278	253	46	65	48	105	275	1,289
1896.....	135	90	284	255	50	61	50	105	272	1,302
1897.....	142	78	279	262	47	63	49	104	270	1,294
1898.....	136	72	274	257	45	62	47	104	267	1,264
1899.....	136	70	272	254	44	66	48	106	262	1,258
1900.....	130	68	274	250	46	63	46	103	265	1,245
1901.....	127	67	267	252	46	65	44	107	264	1,239
1902.....	120	68	258	253	41	62	43	100	259	1,204
1903.....	117	70	246	250	40	57	42	101	261	1,184
1904.....	109	69	237	248	36	57	41	99	252	1,148

MEMBERSHIP OF TRADE UNIONS, BY GROUPS OF INDUSTRIES, 1895 TO 1904.

[In this tabulation only those trade unions are considered which furnished returns for all of the ten years included in this period.]

Year.	Build- ing.	Mining and quarry- ing.	Metal, engineer- ing, and ship- building.	Textile.	Cloth- ing.	Trans- porta- tion (land and sea).	Print- ing, paper, etc.	Wood- working and fur- nishing.	Miscel- laneous.	Total.
1895.....	180,519	288,726	269,923	220,396	78,059	119,855	49,191	32,169	177,008	1,415,846
1896.....	193,643	291,015	305,412	219,271	76,457	134,050	51,219	37,012	195,660	1,503,739
1897.....	215,632	293,805	322,094	220,103	75,316	182,586	53,020	38,998	222,481	1,624,035
1898.....	232,778	366,561	312,311	215,793	70,640	146,550	54,436	37,942	224,349	1,661,360
1899.....	250,654	445,527	335,622	221,187	66,785	161,709	56,727	39,877	243,578	1,821,666
1900.....	253,962	523,541	342,198	221,415	67,174	169,254	57,228	39,943	254,179	1,928,894
1901.....	249,507	530,683	338,632	220,073	65,776	165,893	58,274	40,745	271,291	1,940,874
1902.....	245,649	531,879	337,046	223,050	64,101	154,834	59,062	41,611	269,385	1,926,617
1903.....	238,445	528,775	337,076	220,525	61,726	154,095	60,138	41,476	262,304	1,904,560
1904.....	225,481	501,248	335,908	221,694	58,525	154,206	62,428	39,571	267,694	1,866,755

The mining and quarrying group of trade unions has held first place continuously since 1898 as regards number of members, and shows for the period a greater gain, both relative and actual, than any other group. The groups ranked in order of membership at the end of 1904 as follows: Mining and quarrying; metal, engineering,

and shipbuilding; building; textiles; transportation; printing, paper, etc.; clothing; and woodworking and furnishing.

At the end of 1904, as in previous years, the great bulk of trade-union membership was found embraced in a comparatively small number of unions, and 68.8 per cent of the membership of all unions was included in four groups of industries (building trades; mining and quarrying; metal, engineering, and shipbuilding; and textiles). Included in the 100 principal unions, at the end of 1904, were 1,127,529 members, or 60.4 per cent of the total membership of all unions.

The financial operations and benefit features of trade unions are shown for 100 principal organizations only. The following table shows the financial operations for the ten years, 1895 to 1904:

FINANCIAL OPERATIONS OF 100 PRINCIPAL TRADE UNIONS, 1895 TO 1904.

Year.	Members at end of year.	Income.		Expenditures.		Funds at end of year.	
		Amount.	Per member.	Amount.	Per member.	Amount.	Per member.
1895.....	907,496	\$7,501,719	\$8.27	\$6,702,884	\$7.39	\$8,330,149	\$9.18
1896.....	957,010	8,049,824	8.41	5,919,567	6.18	10,460,405	10.93
1897.....	1,056,617	9,606,189	9.09	9,262,113	8.76	10,804,482	10.22
1898.....	1,031,297	9,251,757	8.97	7,227,862	7.01	12,828,376	12.44
1899.....	1,107,724	8,896,200	8.03	6,108,421	5.52	15,616,156	14.10
1900.....	1,149,937	9,426,610	8.20	7,066,625	6.14	17,976,140	15.63
1901.....	1,155,133	9,884,226	8.56	7,940,245	6.87	19,920,122	17.25
1902.....	1,152,834	10,110,835	8.77	8,715,780	7.56	21,315,178	18.49
1903.....	1,139,559	10,154,093	8.91	9,273,529	8.14	22,195,742	19.47
1904.....	1,127,529	10,207,338	9.05	9,938,196	8.82	22,464,883	19.92

Comparing the figures for 1902, 1903, and 1904 with those for 1901 it is seen there has been a decrease in membership, while the income, expenditures, and funds on hand at the end of the year, both in amount and per member, have increased. When each of three later years is compared with the year next preceding, a loss in membership appears, while all the other items reported show an increase from year to year. Of every £1 (\$4.87) spent by the 100 unions in 1904, 6s. 4d. (\$1.54) was for unemployed benefit, 1s. 3d. (\$0.31) on account of disputes, 8s. 4d. (\$2.03) for sick, accident, superannuation, funeral, and other benefits, and 4s. 1d. (\$0.99) for working and miscellaneous expenses. Unemployed benefits were paid by 81 of the 100 unions, 75 paid either sick or accident benefits, 40 paid superannuation benefits, 87 paid funeral benefits, and 36 paid all four classes of benefits.

When necessary all trade unions pay dispute benefits, and in 1904, out of the 100 unions, 80 are reported as having paid such benefits.

The following tables show the total expenditures and the expenditures per member for the various classes of benefits for each of the years 1895 to 1904:

EXPENDITURES OF 100 PRINCIPAL TRADE UNIONS ON VARIOUS BENEFITS, ETC.,
1895 TO 1904.

Year.	Unem- ployed, etc., benefits.	Dispute benefits.	Sick and accident benefits.	Superan- nuation benefits.	Funeral benefits.	Other ben- efits and grants to mem- bers. (a)	Working and other expenses.	Total.
1895.....	\$2,028,280	\$959,849	\$1,254,151	\$628,951	\$361,114	\$236,351	\$1,234,188	\$6,702,884
1896.....	1,275,719	820,662	1,167,118	680,254	356,977	294,360	1,324,477	5,919,567
1897.....	1,603,838	3,207,228	1,260,716	726,997	378,156	556,518	1,528,660	9,262,113
1898.....	1,161,750	1,599,205	1,306,991	782,674	396,167	495,804	1,485,271	7,227,862
1899.....	915,208	581,420	1,408,998	855,078	439,956	333,774	1,573,987	6,108,421
1900.....	1,281,014	725,381	1,503,262	907,748	465,651	440,584	1,742,985	7,066,625
1901.....	1,595,166	995,394	1,583,768	971,319	466,225	482,217	1,846,156	7,940,245
1902.....	2,063,620	1,060,780	1,657,072	1,066,231	463,758	475,949	1,928,370	8,715,780
1903.....	2,480,324	839,067	1,762,987	1,166,665	450,156	476,659	2,097,671	9,273,529
1904.....	3,152,139	615,349	1,871,262	1,301,283	465,452	502,388	2,030,323	9,938,196

^a Includes grants to members, grants from one union to another, payments to federations, trade councils, congresses, etc.

EXPENDITURES PER MEMBER OF 100 PRINCIPAL TRADE UNIONS ON VARIOUS BEN-
EFITS, ETC., 1895 TO 1904.

Year.	Unem- ployed, etc., benefits.	Dispute benefits.	Sick and accident benefits.	Superan- nuation benefits.	Funeral benefits.	Other ben- efits and grants to mem- bers. (a)	Working and other expenses.	Total.
1895.....	\$2.24	\$1.06	\$1.38	\$0.69	\$0.40	\$0.26	\$1.36	\$7.39
1896.....	1.33	.86	1.22	.71	.37	.31	1.38	6.18
1897.....	1.51	3.04	1.19	.69	.36	.53	1.44	8.76
1898.....	1.13	1.55	1.27	.76	.38	.48	1.44	7.01
1899.....	.83	.53	1.27	.77	.40	.30	1.42	5.52
1900.....	1.11	.63	1.31	.79	.40	.38	1.52	6.14
1901.....	1.38	.86	1.37	.84	.40	.42	1.60	6.87
1902.....	1.79	.92	1.44	.92	.40	.41	1.68	7.56
1903.....	2.17	.74	1.55	1.02	.40	.42	1.84	8.14
1904.....	2.80	.55	1.66	1.15	.41	.45	1.80	8.82

^a Includes grants to members, grants from one union to another, payments to federations, trade councils, congresses, etc.

A review of the items of expenditure during the ten-year period shows a general increase in the expenditure per member for sick and accident and superannuation benefits, and for working and other expenses; unemployed and dispute benefits vary greatly from year to year, while funeral and other benefits and grants vary slightly. The large expenditure per member on dispute benefits in 1897 and 1898 was due to a great dispute in the engineering trade.

Other forms of labor organizations considered in this report are trade councils and federations of trade unions. The distribution of federations of trade unions according to groups of industries, and the aggregate membership of unions represented in the trade councils, for the years 1900 to 1904, are shown in the table following:

FEDERATIONS OF TRADE UNIONS AND TRADE COUNCILS, 1900 TO 1904.

[Many unions are affiliated to more than one federation, involving some duplications of membership figures.]

Groups of industries.	1900.		1901.		1902.		1903.		1904.	
	Num-ber.	Mem-bers.	Num-ber.	Mem-bers.	Num-ber.	Mem-bers.	Num-ber.	Mem-bers.	Num-ber.	Mem-bers.
General federation of trade unions...	1	386,696	1	420,606	1	414,446	1	403,301	1	396,226
Federations of trade unions:										
Building trades.	32	97,694	31	100,654	28	100,699	29	106,122	27	121,266
Mining.....	10	576,936	10	561,430	10	561,316	10	557,640	10	546,460
Metal, engineering, and ship-building.....	14	261,553	14	264,843	14	276,900	12	269,569	12	374,034
Textiles.....	16	281,184	17	297,137	18	291,851	17	248,801	17	249,026
Transportation (land and sea)	5	30,581	5	35,181	3	23,368	3	26,237	3	23,187
Printing, and allied trades..	10	56,982	10	69,524	2	50,370	2	48,988	2	55,130
Woodworking and furnishing	8	9,433	8	11,943	8	14,262	7	13,736	8	14,475
Enginemmen.....	4	15,182	4	15,283	3	18,392	3	10,935	3	6,607
Other trades ...	8	52,201	9	59,121	9	56,847	8	56,839	10	64,967
Total.....	108	1,768,442	109	1,835,722	96	1,808,451	92	1,742,168	93	1,851,378
Trade councils.....	184	761,493	189	796,093	194	815,716	210	850,978	228	874,959

The general federation of trade unions, with its 396,226 members in 1904, was composed of 91 constituent unions. The membership has fallen off since 1901, when it was 420,606; but it was greater at the end of 1904 than it was in 1900. Of the 91 constituent unions, 64 were full-benefit unions; that is, paying for each member 6d. (\$0.12) per quarter, and receiving 5s. (\$1.22) per week per member involved in disputes approved by the federation, while 27 unions were paying half contributions and receiving half benefits.

In 1900 the number of federations was 108, while in 1904 the number was 93, a decrease of 15. The aggregate membership, however, shows an increase of 82,936 for the period 1900 to 1904. The largest number of federations in any industry was found, thruout the entire period, in the building trades. The greatest number of members, however, was in the mining industry.

The number and aggregate membership of trade councils show an increase from year to year, with a total increase of 44 in the number of councils and of 113,466 in membership, during the period.

The report contains a list of the trade-union congresses which have been held in the United Kingdom since 1866, with number of delegates present, number of organizations and of members of organizations represented, and income of each congress.

DECISIONS OF COURTS AFFECTING LABOR.

[Except in cases of special interest, the decisions here presented are restricted to those rendered by the Federal courts and the higher courts of the States and Territories. Only material portions of such decisions are reproduced, introductory and explanatory matter being given in the words of the editor. Decisions under statutory law are indexed under the proper headings in the cumulative index, page 919 et seq.]

DECISIONS UNDER STATUTORY LAW.

CONTRACT OF EMPLOYMENT—ADVANCE PAYMENTS—FRAUDULENT BREACH—CONSTITUTIONALITY OF STATUTE—*State v. Murray, Supreme Court of Louisiana, 40 Southern Reporter, page 930.*—Butler Murray was charged with a violation of a labor contract under the statute, act No. 50, Acts of 1892. This act provides for fine or imprisonment in cases where a laborer receives advances and fails or refuses to perform the labor for which he contracted or to repay the money or the value of the goods advanced. Murray's defense was that the act was unconstitutional as enforcing involuntary servitude and was in violation of the so-called peonage laws, sections 1990 and 5526, United States Rev. St. (U. S. Comp. St., 1901, pp. 1266, 3715). This view was taken by the court of the fifth judicial district, Parish of Jackson, and the indictment was quashed. The State then appealed to the supreme court, where the statute was declared constitutional and a trial ordered. The ruling is stated in the following syllabus, which was prepared by the court:

No one has the right to money obtained in bad faith and through willful and wanton methods. The act of one who imposes upon another, and obtains an amount on representation that he will stay and work, and immediately thereafter leaves, falls within the terms of act No. 50, page 71, of 1892.

He can not be heard to complain of involuntary servitude, for the indictment, the averment of which he does not controvert, shows that he had not performed any work at all.

EMPLOYER AND EMPLOYEE—RELATION—EMPLOYEE RIDING TO PLACE OF WORK—SUNDAY LABOR AS AFFECTING CONTRACT—*Shannon v. Union Railroad Company, Supreme Court of Rhode Island, 63 Atlantic Reporter, page 488.*—In this case Cormack Shannon was refused judgment for damages for injuries received while in the service of the

Union Railroad Company and appealed. The judgment of the court below was affirmed for reasons that appear in the opinion of the court as delivered by Judge Blodgett. The opinion also states the facts in the case, and is as follows:

1. The record shows that on Sunday, the 29th of June, 1902, the plaintiff, who was an employee of the defendant, had been engaged in cleaning a switch on the road of the defendant, and then boarded a car to proceed to another switch on the road to perform a similar task. He gave to the conductor an employee's ticket which had been furnished by the defendant company, and before reaching his destination was injured by a collision between the car on which he was riding and another car of the defendant company. At the trial the plaintiff was nonsuited, on the ground that the negligence of which he complained was that of a fellow-servant, and to this ruling he duly excepted and preferred his petition for a new trial in this court. The ruling of which he complains was a correct ruling. He was traveling to perform his customary work at the time of the accident, and clearly sustained the relation of an employee rather than that of a passenger at the time. (*Ionnone v. N. Y., N. H. & H. R. R. Co.*, 21 R. I. 452, 44 Atl. 592, 46 L. R. A. 730, 19 Am. St. Rep. 812, and cases cited.)

2. The plaintiff, however, contends that the act of the defendant in running its cars on Sunday was an illegal act, because in violation of the Sunday law of the State, viz (Gen. Laws 1896, c. 281, sec. 17): "Every person who shall do or exercise any labor or business or work of his ordinary calling, or use any game, sport, play, or recreation on the first day of the week, or suffer the same to be done or used by his children, servants, or apprentices, works of necessity and charity only excepted, shall be fined not exceeding five dollars for the first offense and ten dollars for the second and every subsequent offense." He further contends that there could be no valid contract on his part to perform work and labor of his ordinary calling on Sunday, and, consequently, that the relation of master and servant, as aforesaid, could not exist for the purposes of this case on that day. The argument does not convince us. If the operation of the cars on Sunday was lawful, as being a work of necessity within the meaning of the statute, clearly he is not entitled to recover for the negligence of a fellow-servant. But even if the cars were being operated contrary to law at that time, the plaintiff was admittedly traveling, on the very car so operated, for the like illegal purpose of performing work and labor of his ordinary calling on that day and for the express purpose of promoting and assisting in the like illegal running of other cars of the defendant on the same day and in the same manner. To concede the plaintiff's contention would result in this absurdity, viz, that he might have an action on the state of facts here shown to have existed on Sunday, although he could have had no action if the same facts had existed on any one of the six remaining days of the week; and it never has been held that the purpose of the Sunday laws was to give an action which otherwise could not be maintained. If the act of the defendant was illegal, the act of the plaintiff was equally so; and the law leaves him where it finds him, in accordance with the ancient maxim, "In pari delicto potior est conditio defendentis."

Plaintiff's petition for a new trial denied, and case remitted to superior court, with direction to enter judgment for the defendant.

EMPLOYERS' LIABILITY—EMPLOYMENT OF CHILDREN IN VIOLATION OF STATUTE FIXING AGE LIMIT—NEGLIGENCE—*Rolin v. R. J. Reynolds Tobacco Company*, Supreme Court of North Carolina, 53 *South-eastern Reporter*, page 891.—Willis Rolin sued the above-named company for injuries received while in its employment. Judgment was in favor of the company in the superior court of Forsyth County, which judgment was on this appeal reversed and a new trial ordered.

The principal point of interest was the construction of section one of chapter 473, Acts of 1903, which prohibits the employment in factories of any child under the age of 12 years, this law coming for the first time before the supreme court. Only that portion of the opinion of the court which contains the conclusion as to the effect of this section of the act is reproduced. The opinion was handed down by Judge Connor, and reads in part as follows:

The act is the result of the well-considered, and we think wise, conclusion of the general assembly, reflecting and crystallizing into law the will of the people of the State. It is therefore not only our duty, but in entire harmony with our judgment, to give to the statute such a construction and application as will effectuate the intention of the general assembly, remedy and prevent the continuation of an evil which threatens the welfare of the young children, and, thereby, the best and highest interest of the State.

Before the passage of the statute the present chief justice, in *Ward v. O'Dell*, 126 N. C. 946, 36 S. E. 194, speaking for two members of this court, said that, notwithstanding there was no statute prescribing the age within which children should not be employed in mills and factories, "there is an aspect in which the matter is for the courts, that is, whether it is negligence per se for a great factory to take children of such immature development of mind and body and expose them for 12 hours per day to the dangers incident to a great building filled with machinery constantly whirring at a great speed." The same line of thought is expressed and sustained by numerous authorities, in *Fitzgerald v. Furniture Co.*, 131 N. C. 636, 42 S. E. 946. Certainly with the positive prohibition imposed by the legislature against the employment of a child under 12 years of age, there can be no question that such employment is very strong, if not conclusive, evidence of negligence. If the age is known to the defendant, the employment is a positive defiance of the law; if the employment is without pursuing the method prescribed, and so easily followed, to learn the truth, its failure to do so gives it but little, if any, better status.

The fact that the statute was enacted, as we know, after several ineffectual efforts, puts an employer upon notice that in the eye of the law, based upon experience, it was dangerous to life and limb of children to be so employed and exposed to the very kind of danger by which the plaintiff was injured. To permit the defendant to escape liability for violating the statute, by saying that it did not anticipate this particular condition, with its disastrous results, would be to nullify the law. Of course, it did not anticipate this particular condition or result. If it had done so, the employment would have been not negligent, but criminal. If the plaintiff be required to show that, in every negligent act, the particular result was in fact anticipated, it would be

difficult to maintain any action for injury sustained by the negligence of another. The State says to employers that they must not take the children under 12 years of age into their mills and factories; that to do so endangers their lives and limbs, dwarfs them mentally, morally, and physically; that it is upon the children that the permanent power and welfare of the State depend. They must not, below the tender and immature age fixed by the statute, be brought into contact with iron and steel machinery propelled by the powerful agencies of steam or electricity. Considered from any point of view, the right of the child to have the opportunity to grow to at least the age named in the statute in a pure atmosphere, without danger of mutilation of body, dwarfing of mind, and to attend the schools provided by the State, the legislation is founded upon a wise and humane policy. Its violation followed by injury gives a cause of action to the child.

EMPLOYERS' LIABILITY—MINE REGULATIONS—BENEFIT OF STATUTE—CONSTRUCTION—*Indiana and Chicago Coal Company v. Neal, Supreme Court of Indiana, 77 Northeastern Reporter, page 850.*—In this case Neal had secured a judgment in the circuit court of Sullivan County on account of injuries received by him while in the employment of the coal company. The judgment of this court was, on appeal, reversed and a new trial ordered. The facts in the case and the statute involved are set forth in the opinion of the supreme court as delivered by Judge Gillett, from which the following is quoted:

It appears that appellee [Neal], the plaintiff below, was injured while driving with a carload of coal through a door opening in a coal mine. The door was so constructed that it was self-closing, and appellee was injured as he stood on the bumper and chain of the car, and while engaged in the effort to keep the door open as the car passed through, owing to the fact that he failed to stoop sufficiently to permit his person to escape the lintel. Appellant was charged with negligence in three particulars: (1) In not affording a doorway of sufficient height; (2) in furnishing a car that was too high; and (3) in failing to designate a person to open and close the door, as required by section 18 of an act of the general assembly, approved March 2, 1891, entitled "An act requiring the weighing of coal, providing for the safety of employees, protecting persons and property injured, providing for the ventilation of mines, prohibiting boys and females from working in mines, conflicting acts repealed, and providing penalties for violation." (Acts 1891, p. 61, c. 49.)

The principal question in the case, which we shall consider upon the evidence, is whether there can be a recovery under the third charge of negligence above mentioned, and we proceed at once to a consideration of that question: Said section 18 (section 7478, Burns' Ann. St. 1901) is as follows: "'Breaks-through' or airways shall be made in every room at least every 45 feet, and all 'breaks-through' or airways, except those last made near the working faces of the mine, shall be closed up and made air-tight. The doors used in assisting or directing the ventilation of the mine when coal is being hauled through shall be opened and closed by persons designated to do the same, so that the driver or other persons may not cause the doors to stand open."

As respects actions wherein a statute is relied on to create a duty, the general rule has been thus declared by one of the older writers: "In every case where a statute enacts or prohibits a thing for the benefit of a person, he shall have a remedy upon the same statute for the thing enacted for his advantage, or for the recompense of the wrong done him contrary to said law." (1 Comyn's Digest, "Action upon the Statute." F.) In *O'Donnell v. Providence R. Co.*, 6 R. I. 211, it is stated that the remedy for a violation of a statute is confined "to such things as are enacted for the benefit of the person suing." So it has been said that: "However great the defendant's negligence, if it was committed without violating any duty which he owed either directly to the plaintiff or to the public in a manner whereof he had a right to avail himself, * * * there is nothing which the law will redress." (Bishop, *Noncontract Law*, sec. 446.) It is stated by Judge Thompson: "The violation of a statute or municipal ordinance is not of itself a cause of action grounded upon negligence in favor of an individual, unless the statute or ordinance was designed to prevent such injuries as were suffered by the individual claiming the damages, and often not then; the question depending upon judicial theories and surmises."

There can be no doubt, construing the section of the statute which is in question in the light of section 2 of the act of 1885, regulating coal mines (section 7443, *Burns' Ann. St.* 1901), that the provision relied on was solely designed to prevent an interference with the circulation of air, especially about the men who were employed at the working faces of the mine. In other words, the purpose of the statute was to keep such doors shut as far as possible, and it was not designed to provide aid for drivers who were passing through such openings. The enactment shows that the legislature has been at the pains expressly to state its reason for requiring trappers, namely, "so that the driver or other person may not cause the doors to stand open." It was declared, in *Perkins v. Thornburgh*, 10 Cal. 189, 191, that, where a statute assumes to specify the effects of a certain provision, it will be presumed that all the effects intended by the lawmaker are stated. An apposite precedent upon the question in hand is found in the recent case of *Allen v. Kingston Coal Co. (Pa.)* 61 Atl. 572 [Bulletin 62, page 318], where reliance was placed upon a similar statute as having created a duty in favor of an employee who had been found dead at a mine door under circumstances indicating that he had been crushed between the frame of the door and the loaded car. The court said: "Appellant's case can get no assistance from the mining act of June 2, 1891 (P. L. 176). The requirement of section 10 of that act, amended by the act of April 20, 1899 (P. L. 65), that all main doors shall have an attendant, 'whose constant duty it shall be to open them for transportation and travel, and prevent them from standing open longer than is necessary for persons or cars to pass through,' has reference solely to ventilation, not to the safety of persons using the gangways. The object was to keep the doors closed."

It is clear upon the authorities that appellee can not recover by virtue of the provisions of the statute upon which he relies, but in announcing this conclusion we deem it proper to state that we have not been unmindful of the provisions of section 13 (page 59) of the same act (section 7473, *Burns' Ann. St.* 1901) that for "any injury to person or persons occasioned by any violation of this act" a right

of action shall accrue. It is true that the word "any" may be taken distributively as including all, but it is common in statutory construction so to restrain a universal word, as "all" or "every," as to make it comport with the general scheme of the statute in which it is found." * * * To quote from Sir Frederick Pollock: "There is no cause of action where the damage complained of 'is something wholly apart from the object of the act of Parliament' as being evidently outside of the mischiefs which it was intended to prevent." (Webb's Pollock on Torts, p. 25.) If this were a case in which the trespasser sought to invoke the provision requiring trappers, it would not admit of question that it would be the duty of the court so to restrain the general provisions of the section granting the remedy as to exclude him, and so here, since it is evident that some exception should be made, the general grant of a remedy should, in accordance with the maxim of Lord Bacon, "be restrained unto the fitness of the matter or person."

We have serious doubt as to the sufficiency of the complaint in respect to the charge that the lintel was constructed too low, and also as to the charge that the car was too high, but it appears unnecessary to pass on the complaint, for the reason that appellee, if he has any case, has not made out one, and we assume will be unable to make out one, within the averments of his complaint. So far as appears he could readily have stooped sufficiently to pass through the door, had he been advised that it was necessary, and therefore the charges referred to are not sustained by the evidence. Whether, since the car was a new one and the bumpers thereof were higher than on the cars which had been in use, he has a cause of action for a failure to warn him, we leave undetermined.

EMPLOYER'S LIABILITY—MINE REGULATIONS—EMPLOYMENT OF MINE MANAGERS AND EXAMINERS—VICE PRINCIPALS—CONSTRUCTION OF STATUTE—*Henrietta Coal Company v. Martin*, *Supreme Court of Illinois*, 77 *Northeastern Reporter*, page 902.—In this case a judgment against the coal company, on account of injuries received by Martin while in its service, had been affirmed by the appellate court of the fourth district, and was brought, on further appeal, to the supreme court. This court also affirmed the judgment of the court below.

The action was based on the provisions of the mining law of the State (pp. 300 et seq., Laws of 1899), which require the appointment of mine managers and examiners having certificates of competency, and which prescribe the duties of such persons. That portion of the opinion which construes these provisions is here reproduced, the case turning on the proved negligence of the employees indicated.

Judge Scott, speaking for the court, said:

Appellant first contends that as it had in its employ and on duty in its mine a certified mine manager and a certified mine examiner at the time appellee was injured, it discharged its duty to appellee in relation to those duties which the statute prescribes shall be per-

formed by the mine manager and mine examiner, and that it is not liable for injuries to the appellee arising from a willful failure of the mine manager to deliver props, or for a willful failure of the mine examiner to perform any duty required of him by the mining act. This is on the theory that the legislature has prescribed the duties which the operator owes to the miner in so far as examination and management of the mine is concerned, and that all that is required of the operator is that he should employ a manager and an examiner holding certificates from the State mining board, as provided by section 8 (page 307) of the act in question, and that if he does so, and he has no notice and the circumstances are not such as to put him on notice that the employees are incompetent, negligent, or otherwise unfit to perform their duties, he is not liable for any injuries occasioned by any willful violation of the mining act, or any willful failure to comply with its provisions on the part of the examiner or manager. In support of this position appellant relies principally upon the case of *Durkin v. Kingston Coal Co.*, 171 Pa. 193, 33 Atl. 237, 29 L. R. A. 808, 50 Am. St. Rep. 801 [Bulletin No. 2, p. 207], and the case of *Williams v. Thacker Coal & Coke Co.*, 44 W. Va. 599, 30 S. E. 107, 40 L. R. A. 812. [Bulletin No. 19, p. 879.] In both Pennsylvania and West Virginia, statutes were enacted which, in their general purposes, were similar to our own. The Pennsylvania statute was determined by the supreme court of that State, in the case above cited, to be unconstitutional; and it was also there said that the mining boss or foreman is a fellow-servant of the other employees of the same master, engaged in a common business; that the duty of the mine owner is to employ competent bosses or foremen to direct his operations, and that when he does this he discharges the full measure of his duty to his employees, and is not liable for an injury arising from the negligence of the foreman. The West Virginia case follows the Pennsylvania case, and the conclusion there reached is, that as the duties of the manager are prescribed by the statute, and not delegated to him by his employer, and that as he is a fellow-servant of the miner, the master is not responsible for his negligence. Under the law of this State the mine manager and mine examiner, while in the performance of the duties prescribed by statute, are not fellow-servants of the miner. We think the effect of the statute is to require of the owner of the mine the performance of those duties which the statute prescribes for the mine examiner and the mine manager. The proprietor, if an individual, may himself act in either capacity if he possesses the necessary certificate, otherwise he is required to perform such duties through the manager and through the examiner. They stand for him and are vice principals, and perform those duties, which he may not delegate to others in such manner as to relieve himself of responsibility. For any willful violation of the statute by either of them, or for any willful failure by either of them to observe its provisions, he is liable. Such has heretofore been assumed to be the law by this court. [Cases cited.]

The fact that the proprietor, if he employs men to act in these capacities, is required to employ those who have obtained the certificate from the State mining board is without significance. The purpose of that provision was, so far as possible, to guard against the possibility of the proprietor employing incompetent, intemperate, negligent, or disreputable persons, and not to enable the operator to

shift to his employees his responsibility for the management of the mine. The object of the mining act, as we gather from its various provisions, is to protect, so far as legislative enactment may, the health and persons of men employed in the mines of the State while they are in the mines. The principal measures prescribed for this purpose require the exercise of greater precaution and care on the part of the mine owner for the safety of the miners than was required by the common law. To hold that he may shift his liability to any person employed by him as examiner or manager who holds the certificate of the State mining board is to lessen his responsibility and defeat in great part the beneficent purposes of the act. To hold him liable for a willful violation of the act or a willful failure to comply with its provisions on the part of his examiner or manager, is to give force and effect to the statute according to the intent of its makers and to prolong the lives and promote the safety and well-being of the miners.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—DEPARTMENTS—SUPERIORS AND SUBORDINATES—CONSTRUCTION OF STATUTE—*Kane v. Erie Railroad Company, United States Circuit Court of Appeals, Sixth Circuit, 142 Federal Reporter, page 682.*—Thomas M. Kane was a fireman on one of two trains which were being switched in the yards of the Erie Railroad Company at Niles, Ohio, and was killed in a collision caused by the alleged negligence of one Bowker, the engineer on the other train. The conductor of Bowker's train was, at the time of the accident, in the telegraph office. The suit could not have been maintained at common law, but was based on an act of April 2, 1890 (sec. 3365-22, Bates' An. Stat.), the essential portions of which are quoted in the opinion.

The case had previously been twice before the circuit court of appeals. On the first trial a judgment in favor of the plaintiff was reversed on the ground that, on the record, Kane appeared to be guilty of contributory negligence. On retrial the circuit court denied recovery, holding that the statute in question was unconstitutional. (See Bulletin 56, p. 297.) On appeal this ruling was reversed by the circuit court of appeals and the statute was declared valid. (See Bulletin 57, p. 690.) On the third trial in the court below a verdict was directed for the defendant company on two grounds: First, that the section referred to does not apply, because Bowker, the negligent engineer, tho in control of his fireman, was not in charge of all the employees on the train, since there was a conductor; and second, because Kane was guilty of contributory negligence in putting himself in a dangerous place on the engine.

On this third appeal the circuit court of appeals reviewed these two rulings and took the contrary position on both points, remanding the case for new trial.

The opinion of Judge Richards, who spoke for the court, included a sufficient statement of the facts, together with a construction of the statute, and is reproduced practically in full.

Prior to the passage of the act of April 2, 1890, the general rule that a railroad company is not responsible to an employee for the negligence of a fellow-servant was subject in Ohio to the modification, first announced in the Stevens case, 20 Ohio, 416, and confirmed in the Keary case, 3 Ohio St. 201, that, where one employee is put under control of another, and the subordinate, without fault on his part, is injured through the negligence of the superior, while both are acting in the common service, the company is liable. Thus the actual relation of the negligent to the injured employee was held to determine the liability of the company. If the negligent employee was in control of the injured one, the company was deemed liable, because then the two were not properly fellow-servants, but one the superior of the other, and as Judge Ranney said in the Keary case, 3 Ohio St. 211:

“No service is common that does not admit a common participation, and no servants are fellow-servants when one is placed in control over the other.”

Recognizing the relation of superior and subordinate as a source of liability, the act under consideration not only gives it statutory force, but broadens the liability of the company by creating as between separate branches or departments a class of constructive superiors and subordinates, who are no longer to be deemed fellow-servants. It provides (section 3, p. 150) that in all actions against a railroad company for personal injury or wrongful death, it shall be held, “in addition to the liability now existing by law:”

“(1) That every person in the employ of such company, actually having power or authority to direct or control any other employee of such company, is not a fellow-servant but superior of such other employee; and

“(2) Also, that every person in the employ of such company having charge or control of employees in any separate branch or department, shall be held to be the superior and not fellow-servant of employees in any other branch or department, who have no power to direct or control in the branch or department in which they are employed.”

In sustaining the constitutionality of this act, we commented upon the ground of classification thus adopted by the legislature, and said (133 Fed. 681, 67 C. C. A. 657, 68 L. R. A. 788):

“The exercise of authority by one employee over another is thus made the test. Any employee who exercises authority over another is ‘not the fellow-servant, but superior,’ of such other, and every employee who exercises authority over another in his own branch or department is ‘the superior, and not fellow-servant,’ of an employee in a separate branch or department who exercises no authority there. If the negligent employee is, by virtue of this enactment, the superior and not fellow-servant of the injured employee, the latter did not assume the risk of his negligence, and the company is responsible. It is to be observed that the basis of the new classification made by the legislature is none other than that of the old made by the supreme

court of Ohio. The class is merely broadened by a logical extension of the rule. Under the old, the company was liable for the negligence of one who exercised authority over the employee injured through his negligence (*B. & O. R. R. Co. v. Camp*, 65 Fed. 952, 13 C. C. A. 233, 243); under the new, it is liable not only for the negligence of one who exercises authority over the employee injured, but of one who, exercising authority in one branch or department, by his negligence causes the injury of an employee in another who exercises no authority there."

But the court below, after a careful analysis of the act and the cases under it, reached the conclusion that the constructive class of superiors created by the second clause is limited to employees in charge and control of separate branches and departments; in other words, to be a superior under this clause, the employee must be in charge and control of all employees in his separate branch or department. The possibility of this construction was suggested in the opinion of this court, delivered by Judge Cochran, when the case was first before it, but the question was left undecided. (118 Fed. 223, 55 C. C. A. 134.) The question is a nice one, and we regret it has not been directly determined by the supreme court of Ohio, the proper tribunal to construe an Ohio statute. We shall give it, however, our best judgment.

The Ohio rule laid down in the *Stevens and Keary* cases contemplated a common employment wherein the superior was in charge or control of the subordinate. The rule obviously could not apply in the case of separate branches or departments, whatever the relative position of the employees in such branches or departments. Counting separate trains as separate branches or departments, a brakeman on one train could not be held the subordinate of a conductor on another train, or the latter the superior of the former. Through this resulted what was charged in the dissent to be the injustice of the holding in *P., Ft. W. & C. Ry. Co. v. Devinney*, 17 Ohio St. 198, where a brakeman, injured by the negligence of the conductor of a separate train, was held to have no right to recover, although he might have maintained an action if he had been hurt through the negligence of the conductor of his own train. The framers of the act may have had in mind this decision.

Coming to the act itself, the meaning of the first clause is plain. It states the Ohio doctrine of superior and subordinate. Every employee actually having authority to direct or control any other employee is not the fellow-servant, but superior, of such other employee. To be such superior, it is not necessary that the employee shall have authority to direct or control more than the one employee who is made his subordinate. He does not have to be in control of a branch or department, or represent the company as a vice principal. The simple relation of superior and subordinate between the two is all that is required; but that is required, and, if absent, the rule does not apply. Thus, an engineer is not the superior of a brakeman, when both are employed on the same train, although the engineer is the superior of his fireman, and the brakeman is the superior of no one. (*Railway Co. v. Lewis*, 33 Ohio St. 196; *Railway Co. v. Shanower*, 70 Ohio St. 166, 71 N. E. 279.)

Coming to the second clause, three things are involved, a separate branch or department, a superior therein, and a subordinate in another branch or department. A "branch" or "department" is not

defined, but, as held in the Margrat case, 51 Ohio St. 130, 144, 37 N. E. 11, the terms evidently refer to the small divisions which separate the employees from one another while at work, and in this sense a train is a separate branch or department. A subordinate is an employee who has no power to direct or control in the branch or department in which he is employed. A superior in a separate branch or department, for whose negligence the company is liable, is an employee "having charge or control of employees in any separate branch or department." The statute does not provide, as it easily might have done, that to be a superior the employee must have charge or control of the separate branch or department, or of all the employees therein, but simply of employees therein; that is, as construed in the Margrat case, of any employee therein. (51 Ohio St. 144, 37 N. E. 11.)

Thus the legislature divided all the employees of a railway company, working in separate branches and departments, into superiors and subordinates; superiors being all those having some authority, and subordinates those having none. The line of distinction is clear. As between separate branches or departments, the company is only liable for the negligence of superiors, and only responsible for injuries done to subordinates. If a subordinate is given charge or control of a coemployee, he ceases to be a subordinate; but, according to the court below, he does not become a "superior," unless he is given charge or control of all the employees in the particular branch or department. Certainly, under the first clause, he becomes the actual superior of the employee under him, and the company is liable if the latter is injured through his negligence, and we think he also becomes the constructive superior of all employees in separate branches or departments who exercise no authority there. If one of them is hurt through his negligence, in our opinion the company is liable. In this connection, it is to be noted that, while an employee may be the constructive superior of all the subordinates in separate branches and departments, he is not the constructive superior of any subordinate in his own department, and is the actual superior only of those he really directs and controls.

This construction seems to us to be sustained by the cases decided, although the precise point was not raised. In the Margrat case, 51 Ohio St. 130, 37 N. E. 11, a brakeman was injured by the negligence of the engineer of another train. It is true it is not stated there was a conductor on that train. Probably there was not. The court apparently gave no consideration to the question whether there was or was not. It did not consider whether the engineer was or was not in charge of the train. It did consider and determine that the train was a separate branch or department, and then took up the question whether the engineer had charge or control of any employee in such separate branch or department. It was conceded the engineer had charge of the engine and of the fireman thereon, and the court held this was sufficient. It was not necessary that he should have control of more than one employee. To have control of "any coemployee whatever" (page 144, 51 Ohio St., page 11, 37 N. E.) was enough. Respecting the relation of superior and subordinate, created by the statute, the court says (page 144, 51 Ohio St., page 14, 37 N. E.):

"But the statute, we think, declares that relation to exist, as a matter of law for the purpose of charging the company, if the engineer

was the superior of—that is, was authorized to command or direct—any coemployee whatever, and Margrat was without such authority.”

And the syllabus, which is authoritative in Ohio, holds:

“1. An engineer, in charge of a locomotive on one train of cars of a railroad company, is in a branch or department of its service separate from that of a brakeman on another train of the same company, within the meaning of the terms ‘separate branch or department,’ as those terms are employed in section 3 of the act of April 2, 1890 (87 Ohio Laws, p. 150).

“2. An engineer in charge of a locomotive, who has authority to direct or control a fireman serving on the same locomotive is a ‘superior,’ within the meaning of the above-named section.”

According to the court below, what the supreme court held in this case was that an engineer, who, in the absence of a conductor, is in charge of a train of cars, whether consisting of an engine running light, or an engine and cars, is a “superior,” within the meaning of the act. If the court meant this, why not say so? The syllabus does not describe the engineer as being in charge of the train, but of the locomotive, with authority to direct or control the fireman serving thereon. This makes him a superior. Obviously, the court had in mind not the control of the train, but only of the fireman. It was not the control of a department, but of some employee therein, which was determinative. Just as, under the old Ohio rule, an employee in charge of another was held to be his superior, for whose negligence the company was responsible, regardless of whether or not he was in charge of a department or otherwise a vice principal.

In the case of *L. S. & M. S. Ry. v. Pero*, 22 Ohio Cir. Ct. R. 130, the plaintiff's intestate was a switchman at work in the Toledo yards of the railroad company. He was run down and killed by a yard engine, carrying both an engineer and conductor. It was charged that both the conductor and the engineer were negligent in failing to give proper signals. Suit was brought under this act. It was conceded that Pero was a subordinate, and it was claimed that the engineer and conductor were superiors, within the meaning of the statute. The question of negligence was submitted to the jury, and there was a verdict and judgment against the railway company. The circuit court affirmed the judgment in an opinion delivered by Judge Haynes. In this opinion, after discussing the evidence tending to show that Pero was in a separate department, the court says that for any negligence of the conductor the company would be liable, and for any negligence of the engineer on the engine the company would be liable. “We think the facts tend to show very strongly that there was negligence, both on the part of the conductor and of the engineer. At any rate this was the question that was submitted to the jury.” (Page 134.) This case was carried to the supreme court, and the judgment affirmed. (*Railway Co. v. Pero*, 65 Ohio St. 608, 63 N. E. 1132.). But it is said that, since the jury could have based their verdict on the negligence of the conductor, we are at liberty to say the supreme court affirmed it for that reason. With this we disagree. The rule is quite different. If the jury under the instructions might have based its verdict upon the negligence of the engineer, then, before affirming the judgment, it was necessary to hold that the company was liable for the negligence of the engineer. Such was the holding in *Railroad Co. v. Keary*, 3 Ohio St. 202, where

Judge Ranney, speaking for the court, and referring to the Stevens case, 20 Ohio, 416, said (page 204):

"In that case, as in this, it was left in doubt whether the negligence complained of, and upon which the jury found their verdict, was that of the superintendent or conductor. In this case as in that, it is necessary to find the company liable for the negligence or carelessness of both the superintendent and conductor, before the judgment can be affirmed, as the instruction covered both, and it can not now be told upon which the carelessness and negligence was fixed by the evidence."

We are satisfied, from the action of the supreme court of Ohio in these two cases, that it would construe the statute as we do, not as requiring an employee to be in charge or control of a separate branch or department, and of all the employees therein, in order to constitute a constructive "superior" within the meaning of the statute, but only to be in charge or control of another employee, or as the court put it, "any coemployee whatever," in such branch or department. This construction, we think, not only simplifies the act and contributes to its coherence, but will facilitate its proper enforcement by making plain its requirements. It is much easier to prove that an employee is in control of another employee than that he is in control of all the employees in a particular branch or department, for it is not necessary to place a branch or department in control of a single employee. Take the case of a train. The control of the employees thereon might by rule be readily distributed among several employees, so that, while each might have control of one or more, neither would have control of all, and so the train could be put in the singular situation of having several actual but no constructive superiors aboard.

Kane was hurt while cleaning his locomotive. It was then about half past 6 o'clock in the morning. He had gone on duty at 6. The locomotive was backing slowly, drawing after it 10 or 12 cars; that next the engine being a gondola. The engineer stated that the train was "just merely going," it had "just about come to a stop." A witness for the defense estimated its speed at about 3 miles an hour. When the collision occurred, Kane was standing on the front part of the engine, wiping the number plate or the headlight with a piece of waste, which he held in his left hand. The engine had no pilot, but what is called a bunting beam, having underneath a footboard, and on top a hand rail. There was also a hand rail running around the boiler from the cab on one side to the cab on the other, high enough above the running board to afford a good hold. The evidence was conflicting as to precisely where Kane was standing when the collision occurred. Baldwin, a witness for the defendant, put him on the bunting beam directly in front of the boiler, and says he was wiping the headlight. Rhie, a witness for the plaintiff, says he was standing on one end of the bunting beam holding to the hand rail along the boiler with his right hand, while his left was wiping either the end of the boiler or the headlight; he was facing the engine. Other witnesses testified that he could not stand directly in front of the headlight without standing on the round hand rail above the bunting beam; that the natural place for him to stand was to one side, holding to the hand rail along the boiler. Bowker's train was running at a speed of about 10 miles an hour when it struck the tender of the engine on which Kane was working. The tender and engine was

forced back, and the body of the gondola was torn from the draft timbers and shot up against the front of the engine, breaking the number plate and headlight. In some way Kane was thrown off or caught. He was found dead lying on the draft timbers of the gondola, cross-ways of the track. A bolt had apparently been driven through his back.

On the first trial, the following rule respecting firemen was in evidence:

"They must report for duty at the appointed times; attend to the fires of the locomotive when on the road, and to taking water and oiling the machinery; assist engineman in watching for signals and obstructions, clean and polish their locomotives at the end of each trip, and assist in making repairs when necessary."

The reversal of the judgment on the first trial, and the holding that the record showed a case of contributory negligence, was based not simply on the fact that the evidence showed that Kane was in a dangerous place, but was there in violation of the above rule in two respects: He was cleaning the locomotive, not at the end of the trip, but while it was in motion, and he was not assisting the engineer in watching for signals and obstructions, a thing he ought to have been doing. The court held that he was guilty of contributory negligence in being in a dangerous place in violation of a rule of the company; that, if he had been at his post of duty, in the cab of the engine, watching for signals and obstructions, the collision would not have caught him.

The court below could see no substantial difference in the case presented on the last trial from that on the first, and therefore naturally felt bound by the former ruling. But we find a material difference resulting from the elimination of the rule. On the last trial, there was evidence to justify a finding that the rule in question, so far as it required the locomotive to be cleaned only at the end of each trip, had been abrogated in accordance with the doctrine of *Railway Co. v. Craig*, 73 Fed. 642, 19 C. C. A. 631; *Id.*, 80 Fed. 488, 25 C. C. A. 585. The evidence was overwhelming to the effect that the firemen of this company at the time of the accident worked from 6 in the morning to 6 at night, and always cleaned their engines during the day, sometimes while they were standing still and sometimes while in motion; and that this custom was known to and sanctioned by the company. In cleaning his engine at the time he did, Kane was therefore only doing his work under the modified rule. Being in the discharge of his duty, he was where he had a right to be, and was not violating the rule requiring him to look out for signals and obstructions. That part of the rule had no more application to him when at work cleaning the engine than when at work shoveling coal into the fire box. Besides, it may be said in this connection there was testimony tending to show that Kane was standing on the end of the bunting beam facing the cab window, through which he had a view of the track ahead and could thus assist the engineer in watching for signals and obstructions. Moreover, the collision did not result from any failure to watch for or observe either a signal or an obstruction. It resulted from the sudden and unexpected negligence of Bowker—a thing which could neither have been foreseen nor prevented.

With the rule out of the way, the Jones case, 95 U. S. 439, 24 L. Ed. 506, and Kresanowski case (C. C.) 18 Fed. 229, cease to apply. In those cases the injured persons seated themselves on the pilots of the engines which were running head on—an extremely dangerous place under the circumstances. And they did this without reasonable cause or excuse. When Kane went out on the running board to clean the engine, it had almost stopped. He was in no more danger than he would have been on the rear of the tender if the gondola had been coupled to it, or than a brakeman, standing on the front end of the gondola, would have been. Any place where there is a coupling is dangerous in case of a collision, but how dangerous, and whether a fireman or brakeman of ordinary prudence should and would avoid such a place while his train was moving slowly and just about to stop, is, we think, a question for the jury under all the circumstances of the particular case. With the rule practically out of the way, it seems to us, in view of the conflict of evidence, that the question whether Kane was or was not guilty of negligence in being where he was, and doing what he did, should have been submitted to the jury under proper instructions. It was peculiarly a question for such a body to pass on.

If it be said that, in our first opinion, we stated that, irrespective of the rule, Kane was in a dangerous position, and therefore was negligent, it will be seen, upon a careful reading, that we held the Jones and Kresanowski cases applicable, because Kane had no reasonable occasion for being where he was. We said (118 Fed. 223, 55 C. C. A. 138):

“It would seem it was negligence for the defendant to be where he was, because of the great danger of that position, and the absence of reasonable occasion for his being there.”

And on page 139, 55 C. C. A., page 232, 118 Fed.:

“But, as we have seen, the work was not required or even authorized, and his being there was therefore entirely without reasonable occasion for it.”

But, under the modified rule, the work of cleaning the engine was authorized, and there was therefore reasonable occasion for his being where he was. It does not seem to us just that the railroad company, while it sanctions the practice of its firemen in cleaning their engines under such circumstances as existed here, should be permitted to say it was necessarily dangerous, and that a fireman in pursuing that practice is, as matter of law, guilty of contributory negligence.

The judgment is reversed, and the case remanded, for further proceedings not inconsistent with this opinion.

EXAMINATION AND LICENSING OF PLUMBERS—POLICE POWER—CONSTITUTIONALITY OF STATUTE—*State ex rel. Richey v. Smith*, Supreme Court of Washington, 84 Pacific Reporter, page 851.—A. J. Richey was convicted in the superior court of King County of a violation of chapter 66, Laws of 1905, which forbids engaging in business as a journeyman plumber without having procured a license, and was committed to jail. A writ of habeas corpus was sued out on the ground that his restraint and imprisonment were illegal, the act

under which he was held being unconstitutional. The supreme court supported this contention, and ordered Richey discharged.

The opinion of the court was delivered by Judge Rudkin, from which the following is quoted:

The power of the legislature to make all needful rules and regulations for the health, comfort and well-being of society can not be questioned, but there are certain limits beyond which the legislature can not go, without trenching upon liberty and property rights which are safeguarded by the State and Federal constitutions. As said by the court *In re Jacobs*, 98 N. Y. 108, 50 Am. Rep. 636: "The limit of the power can not be accurately defined, and the courts have not been able or willing definitely to circumscribe it. But the power, however broad and extensive, is not above the constitution. * * * Generally it is for the legislature to determine what laws and regulations are needed to protect the public health and secure the public comfort and safety, and while its measures are calculated, intended, convenient, and appropriate to accomplish these ends, the exercise of its discretion is not subject to review by the courts. But they must have some relation to these ends. Under the mere guise of police regulations, personal rights and private property can not be arbitrarily invaded." And *In re Aubrey*, 36 Wash. 308, 78 Pac. 900, 104 Am. St. Rep. 952 [see Bulletin No. 58, p. 994], this court said: "It may be stated as a general principle of law, that it is the province of the legislature to determine whether the conditions exist which warrant the exercise of this power; but the question, what are the subjects of its exercise; is clearly a judicial question. One may be deprived of his liberty, and his constitutional rights thereto may be violated, without the actual imprisonment or restraint of his person. 'Liberty' in its broad sense, as understood in this country, means the right, not only of freedom from actual servitude, imprisonment or restraint, but the right of one to use his faculties in all lawful ways, to live and work when he will, to earn his livelihood in any lawful calling, and to pursue any lawful trade or avocation. All laws, therefore, which impair or trammel these rights—which limit him in his choice of a trade or profession—are infringements upon his fundamental rights of liberty, which are under constitutional protection."

We can not close our eyes to the fact that legislation of this kind is on the increase. Like begets like, and every legislative session brings forth some new act in the interest of some new trade or occupation. The doctor, the lawyer, the druggist, the dentist, the barber, the horseshoer, and the plumber have already received favorable consideration at the hands of our legislature, and the end is not yet, for the nurse and the undertaker are knocking at the door. It will not do to say that any occupation which may remotely affect the public health is subject to this kind of legislation and control. Our health, our comfort, and our well-being are materially affected by all our surroundings—by the houses we live in, the clothes we wear, and the food we eat. The safety of the traveling public depends in no small degree on the skill and capacity of the section crews that build and repair our railroads, yet are we on this account to add the architect, the carpenter, the tailor, the shoemaker, those who produce and prepare our food, and all the rest to the ever-growing list? If so, it

will be but a short time until a man can not engage in honest toil to earn his daily bread without first purchasing a license or permit from some board or commission. The public health is entitled to consideration at the hands of the legislative department of the Government, but it must be remembered that liberty does not occupy a secondary place in our fundamental law. Under some of the acts to which we have referred members of the board of health form part of the examining board, but our act has not even this saving grace. By its terms two master plumbers and one journeyman plumber are constituted the guardians of the public health and welfare. We are not permitted to inquire into the motive of the legislature, and yet, why should a court blindly declare that the public health is involved, when all the rest of mankind know full well that the control of the plumbing business by the board and its licensees is the sole end in view. We are satisfied that the act has no such relation to the public health as will sustain it as a police or sanitary measure, and that its interference with the liberty of the citizen brings it in direct conflict with the Constitution of the United States.

The judgment should be reversed, and the prisoner discharged; and it is so ordered.

Judge Root, concurring, said:

To the foregoing may be added this thought: The liberty and natural rights of a citizen—such as his privilege to engage in a lawful vocation for a livelihood—can be denied him by the legislature only where such deprivation is necessary to accomplish a given result essential to the welfare of the public. If that result can be attained in a practicable manner without interference with such liberty and rights, there is an absence of that necessity which is an essential and prerequisite to the validity of such a statute.

In the case at bar the only justification urged in behalf of the statute is that good plumbing is necessary to the health of people in cities having over 10,000 inhabitants. Avowedly it is sought to insure good plumbing by means of this statute. It is self-evident that the same, or a better, result can be obtained by means of statutes or ordinances requiring good plumbing, and insuring it by means of adequate inspection. Such a statute or ordinance would not interfere with the liberty or natural rights of any person, and would safeguard the health of the public as fully as, or more so than, the statute now in question. It therefore follows that the liberty and natural rights of the individual are infringed by this statute unnecessarily and, consequently, unconstitutionally.

HOURS OF LABOR OF FEMALE EMPLOYEES—POLICE POWER—CONSTITUTIONALITY OF STATUTE—*State v. Muller*, *Supreme Court of Oregon*, 85 *Pacific Reporter*, page 855.—Curt Muller was convicted in the circuit court of Multnomah County of a violation of an act of the Oregon legislature, page 148, Acts of 1903, which limits to ten per day the number of hours of employment of females in factories. Muller appealed on the question of the constitutionality of the act referred to. The statute was held to be valid and the judgment of the lower court

was affirmed, as appears from the following quotation from the opinion of the court as delivered by Judge Bean:

The right to labor and to contract for labor, like all rights, is itself subject to such reasonable limitations as are essential to the peace, health, welfare, and good order of the community, and, as said by the Supreme Court of the United States: "A large discretion is necessarily vested in the legislature to determine, not only what the interests of the public require, but what measures are necessary for the protection of such interests." (*Lawton v. Steele*, 152 U. S. 133, 14 Sup. Ct. 499, 38 L. Ed. 385.) In *Holden v. Hardy*, 169 U. S. 366, 18 Sup. Ct. 383 [see Bulletin No. 17, p. 625], the court, referring to the limitations placed by a State upon the hours of workmen in underground mines, said: "These employments, when too long pursued, the legislature has judged to be detrimental to the health of the employees, and, so long as there are reasonable grounds for believing that this is so, its decision upon this subject can not be reviewed by the Federal courts." And in the subsequent case of *Gundling v. Chicago*, 177 U. S. 183, 20 Sup. Ct. 633, 44 L. Ed. 725, the court uses this language: "Regulations respecting the pursuit of a lawful trade or business are of very frequent occurrence in the various cities of the country, and what such regulations shall be and to what particular trade, business, or occupation they shall apply, are questions for the State to determine, and their determination comes within the proper exercise of the police power by the State, and unless the regulations are so utterly unreasonable and extravagant in their nature and purpose that the property and personal rights of the citizen are unnecessarily, and in a manner wholly arbitrary, interfered with or destroyed without due process of law, they do not extend beyond the power of the State to pass, and they form no subject for Federal interference." The legislature may not, therefore, unduly interfere with the liberty of contract, or arbitrarily limit the right of a citizen to enter into such contracts as to him may seem expedient or desirable; but it may prescribe reasonable regulations in reference thereto and limitations thereon to promote the general welfare and guard the public health, and the power of the courts to review such regulations exists only "when that which the legislature has done comes within the rule that if a statute, purporting to have been enacted to protect the public health, the public morals, or the public safety, has no real or substantial relation to those objects, or is beyond all question a plain, palpable invasion of rights secured by the fundamental law." (*Jacobson v. Massachusetts*, 197 U. S. 11, 31, 25 Sup. Ct. 358, 49 L. Ed. 643.)

Now, the statute in question was plainly enacted, although not so declared therein, in order to conserve the public health and welfare by protecting the physical well-being of females who work in mechanical establishments, factories, and laundries. Such legislation must be taken as expressing the belief of the legislature, and through it of the people, that the labor of females in such establishments in excess of ten hours in any one day is detrimental to health and injuriously affects the public welfare. The only question for the court is whether such a regulation or limitation has any real or substantial relation to the object sought to be accomplished, or whether it is "so utterly

unreasonable and extravagant" as to amount to a mere arbitrary interference with the right to contract. On this question we are not without authority. Legislation limiting the hours during which women may be employed is in force in several of the States of the Union, and, so far as we are advised, such legislation has everywhere been upheld, except in the State of Illinois.

Judge Bean then reviewed a number of cases, and continuing said:

The case of *Ritchie v. People*, 155 Ill. 98, 40 N. E. 454, 29 L. R. A. 79, 46 Am. St. Rep. 315 [see Bulletin No. 2, p. 203], is the only decision to which our attention has been called, or which we have been able to find, in which an act of the kind under consideration has been held unconstitutional and void. The case is well considered and ably presented, but is, we think, borne down by the weight of authority and sound reason.

We are of the opinion, therefore, that the act in question is not void because an arbitrary and unwarranted limitation of the right of contract, but is within the police power of the State. Nor can we concur with counsel that it is an arbitrary and unwarrantable discrimination against persons engaged in the particular businesses or employments specified, because persons in other businesses or callings are not prohibited from requiring or permitting their female employees to work more than ten hours a day. Nearly all legislation is special in the objects sought to be obtained or in its application, and the general rule is that such legislation does not infringe the constitutional right to equal protection of the laws when all persons subject thereto are treated alike under like circumstances and conditions.

The judgment is affirmed.

LABOR ORGANIZATIONS—DAMAGES—LIABILITY OF MEMBERS—DUE PROCESS OF LAW—*F. R. Patch Manufacturing Company v. Capeless et al.*, *Supreme Court of Vermont*, 63 *Atlantic Reporter*, page 938.—The company above named had secured judgment for damages in an action against Protection Lodge, No. 215, International Association of Machinists, on account of injuries caused by a boycott by the association, and other interference with the business of the company. (See Bulletin No. 59, p. 367.) This judgment remaining unsatisfied, the company sued Capeless and others, associates and members of Protection Lodge, No. 215, to recover from them personally the amount due on the judgment against the association.

The action was brought in the Rutland County court. Capeless and his codefendants demurred to the declaration and denied their individual liability on a judgment against the association. This demurrer was overruled and the declaration was held to be sufficient. The case was then taken to the supreme court on exceptions to these rulings, which were, however, sustained, and the case was remanded for further proceedings in the court below.

The opinion of the court, as delivered by Judge Watson, is reproduced in full. After stating briefly the history of the case, Judge Watson said:

Section 1099, V. S., under the provisions of which Protection Lodge, No. 215, was thus sued in its associate name and service of process made upon its president, reads as follows: "A partnership, or an unincorporated association or joint stock company, consisting of five or more persons having a president, other principal officer, clerk or treasurer may sue and be sued in its firm, associate or company name, and service of process against such partnership association, or company, made upon either of such officers shall have the same force and effect as regards the joint rights, property, and effects of the partnership, association, or company as if served upon all the partners, associates, or shareholders." The present suit, which may be regarded as supplementary, is brought against alleged associates and members of Protection Lodge, No. 215, for the amount unpaid on that judgment, upon section 1183, V. S., which reads: "If execution on a judgment obtained against a partnership, association, or company in its firm, associate or company name is returned unsatisfied in whole or in part, a suit for the amount unpaid may be brought against any or all of the partners, associates, or shareholders upon their original liability, provided that only one such suit shall be brought and maintained at the same time, and if the execution issued in the last-named suit is returned unsatisfied in whole or in part, subsequent actions may in like manner be maintained for the amount unpaid."

At common law an unincorporated association, as regards its rights and liabilities, is fundamentally a large partnership. - The relation of the members composing it is to each other and to the outside world, that of partners. (*Walker v. Wait et al.*, 50 Vt. 668; *Burnes v. Pennell*, 2 H. L. Cas. 497.) Partnership debts are the debts of each partner in solido (3 Kent's Com. 32; *Cutler v. Estate of Thomas*, 25 Vt. 73), and at law both separate and joint creditors may attach either separate or joint property and sell it on execution in satisfaction of their judgments without regard to equities existing between their debtors. But in equity partnership effects must be applied in satisfaction of partnership debts and liabilities in preference to debts due creditors of the individual partners; and to the extent that partnership debts and liabilities are not fully paid by the joint property, they stand the same as other debts against each partner's separate estate. (*Bardwell v. Perry*, 19 Vt. 292, 47 Am. Dec. 687; *Washburn v. Bank of Bellows Falls*, 19 Vt. 278; *Barton National Bank v. Atkins*, 72 Vt. 33, 47 Atl. 176.) It is also a well-established rule that a firm or unincorporated company must sue and be sued in the names of its individual members, however numerous they may be. (*Dicey on Parties*, 147, 266.) Yet as we have seen, by section 1099, V. S., any partnership, unincorporated association, and joint-stock company falling within its provisions, may sue and be sued in its firm, associate, or company name, and that service of process made upon either of its officers named in that section shall have the same force and effect as regards the joint rights, property, and effects of the partnership, association, or company as if served on all the members. That section of the statute and the section upon which this action is brought, in their

original form, were parts of the same act No. 71, p. 71, Laws of 1882, and must be construed together.

Such partnerships, associations, and joint-stock companies may be, and often are, not only composed of many different members, residents of different States and countries, but constantly changing by some dropping out and others coming in. Manifestly this statute was enacted for the practical convenience and benefit of the partnership, associations, and companies to which it relates, as well as for the convenience and benefit of creditors, in bringing and prosecuting suits. In operation it inures also to the more substantial benefit of the individual partners, associates, and shareholders. We do not consider whether or not the procedure therein provided is exclusive. But surely when the statute is invoked to enforce liabilities against partnerships, associations, or companies, the members have the benefit of equity principles in that the joint property must first be taken to satisfy judgment, and it is only for the amount unpaid when executions against such property are returned wholly or in part unsatisfied that suits can be brought against the individual members and their separate property taken. In the first instance the obligation of each partner to the others and to creditors is in nature contractual at common law. By section 1183, partners, associates, and shareholders are made individually liable to execution creditors for the amount of a judgment unpaid after an execution against the joint property has been returned unsatisfied in whole or in part, with the further limitation that only one suit against members shall be brought and maintained at the same time, and if the execution in the last suit is not returned fully satisfied, subsequent actions can be had in like manner for so much as remains unpaid. Here the liability of the individual members in its modified form is contractual in nature by operation of the statute. In legal effect each member when he becomes such thereby obligates himself to the other members and to all persons who may hold liabilities against the firm, association, or company of which he becomes a member, for the payment of the amount unpaid on judgments against it after the joint property has been taken in execution and applied thereon, and this obligation is in law as much a part of every contract and liability against the partnership, association, or company as it would be if it had been directly entered into by the members in connection therewith. The statutory liability here imposed is analogous to the statutory liability of individual stockholders for the debts of a corporation. In cases involving the latter it is held that the stockholders by availing themselves of the benefits to be derived from the corporate organization impliedly agree to be responsible for the debts of the corporation; that creditors contract with reference to it; that it becomes a part of the law of their contracts; and that when a person becomes a stockholder this liability rests upon him as an incident to his stock. (*Barton National Bank v. Atkins*, before cited; *King v. Cochran*, 76 Vt. 141, 56 Atl. 667, 104 Am. St. Rep. 922; *Whitman v. National Bank*, 176 U. S. 559, 20 Sup. Ct. 477, 44 L. Ed. 587.)

It is strenuously urged, however, that the action under the provisions of section 1183 must be based upon the "original liability," and that this action is not of that character. The statute provides that "a suit for the amount unpaid may be brought against any or

all of the partners, associates, or shareholders upon their original liability." It is evident from the section as a whole that the remedy there given is statutory, consequently that the actions must be based upon the statute, and brought to recover the amount unpaid on the judgment, rather than for the sum due or for damages on the liability merged in the judgment. The amount to be recovered is fixed by the judgment, which is inconsistent with the idea that the supplemental suit against a member must be upon the same cause of action as that upon which the judgment was obtained. And such inconsistency is the more noticeable when we consider that the judgment may have been recovered in an action *ex delicto*, where the damages were unliquidated. We think the words "original liability" as used in that section, have reference to the liability consequent on membership in the partnership, association, or company at the time of the creation of the liability upon which the judgment was recovered. As to the partnership, association, or company, the judgment is conclusive. It is also conclusive in respect to all matters involved in the suit upon all persons who were members when the liability merged in the judgment was created. All such persons had an "original liability" within the meaning of section 1183, while persons whose membership had then ceased or did not commence until subsequent thereto, had no such "original liability" as makes them responsible in supplemental proceedings under the statute. It may happen that the original action was based upon several distinct contracts and that the defendants in the supplemental suit were members when some of the contracts only were made, in which event their liability under the statute would be limited accordingly. Thus "upon their original liability" as it may be made to appear depends their statutory liability for the amount unpaid on the judgment. In the original action against Protection Lodge, No. 215, the question whether the defendants in this supplemental suit were members of that association at the time when, etc., was not tried or decided, nor involved in the judgment recovered. It follows that whether they were such members is an open question in this suit and one upon which they are entitled to be heard. (*Wilson v. Seligman*, 144 U. S. 41, 12 Sup. Ct. 541, 36 L. Ed. 338; *Clark v. Cullen*, 9 Q. B. Div. 355.)

It is further contended that since in the original suit against the association no personal service of process was made upon the individual members, they can not be bound by the judgment, and that to hold otherwise would be to take their property without due process of law and in violation of the fourteenth amendment of the Constitution of the United States. At common law, in a partnership the members do not form a collective whole distinct from the individuals composing it. The rights and liabilities of a partnership are the rights and liabilities of the partners, and are enforceable by and against them individually. The association of which the defendants are alleged to have been members is composed of more than five members, has an associate name, a president, other principal officer, clerk or treasurer. The associate name is nothing more than the collective name for all the members. (*Taff Vale Railway Co. v. Amalgamated Society of Railway Servants*, L. R. 1901, App. Cas. 426; *Lewis & Co. v. Locke*, 41 Vt. 11.) In providing that suits

may be brought by or against such partnerships, associations, or companies in their firm, associate, or company name, the statute recognizes an entity separate and distinct from the members and specifies in what manner service of process may be made upon it. Yet with this recognition the individual members are none the less concluded by the judgment; for, first, considered as such entity the relation of the members thereto is analogous to the relation of stockholders to a corporate entity. They are so far an integral part of it that in the view of the law they are privy to the proceedings touching the body of which they are members. (*King v. Cochran and Whitman v. National Bank*, before cited.) And, secondly, as we have before seen, in becoming members they impliedly contracted with reference to these provisions of the statute and are bound by them. The implied agreement in this respect covered not only the liability but the method in which the extent of that liability shall be determined. This doctrine was laid down and applied in *King v. Cochran* where the liability of a stockholder in a corporation was involved, and it is equally applicable here. Regarding this principle it is said in *Freeman on Judgments*, vol. 1, sec. 176: "In many instances, the relation of the nominal parties to the suit to other persons is such that the latter are conclusively bound by a judgment against the former, in the absence of fraud or collusion, although they are not notified of the pendency of the suit, and are not called upon to conduct its prosecution or defense. In respect to the question, Who are these parties whose interests are thus inseparably associated? the decisions are often inconsistent; but undoubtedly the general principle sanctioned by a vast preponderance of authority is, that every person who has made an unqualified agreement to become responsible for the results of a litigation, or upon whom such responsibility is cast by operation of law in the absence of any agreement, is conclusively bound by the judgment." It follows that the defendants' property is not being taken without due process of law, for no fundamental rights secured by the fourteenth amendment are denied, and the forms of procedure in the State courts are not controlled thereby. (*Louisville & N. R. Co. v. Schmidt*, 177 U. S. 230, 20 Sup. Ct. 620, 44 L. Ed. 747.)

One of the defendants moved to dismiss the suit for that the alleged cause of action set forth in the declaration is not founded on contract, express or implied, hence it being brought by trustee process the court is without jurisdiction. We have already seen that the liability of the members under the statute upon which the action is based is contractual in nature. The action is, therefore, founded on an implied contract and properly brought by trustee process. (V. S. 1304.) The exception by the Delaware and Hudson Company to the overruling of the motion to quash the return of service upon it is not relied upon here.

The pro forma judgment overruling the motion to dismiss, overruling the motion to quash, overruling the demurrer, and adjudging the declaration sufficient, is affirmed, and cause remanded.

LABOR ORGANIZATIONS—ENFORCEMENT OF BOYCOTT ORDERS—EXTORTION—*March v. Bricklayers and Plasterers' Union No. 1 et al.*, *Supreme Court of Errors of Connecticut*, 63 *Atlantic Reporter*, page 291.—George L. March was a manufacturer of bricks at Hartford, Conn., and disposed of his output to various “boss masons” and contractors. The union named had adopted an agreement that none of its members should work for a “boss mason” who employed other than union men and also penalized any employer who should buy bricks of a manufacturer who sold to “unfair” contractors. March had sold bricks to a “boss mason” who was classed by the union as “unfair,” and subsequently sold some to one Flynn a “fair” contractor. The business agent of the union called on March and Flynn and told them that unless Flynn would agree to become March’s surety for the payment of a fine of \$100 assessed against him by the union, Flynn’s men would be called out. After considerable effort to make other adjustments, Flynn paid the sum for March and held it out of the amount due the latter for bricks. March then sued in the court of common pleas of Hartford County to recover from the union the sum named, alleging that it was secured by a conspiracy to extort the payment, and further that the defendants had conspired and combined to injure him in his business and property unless the sum was paid. March secured a judgment ordering the money to be repaid, whereupon the union appealed, the appeal resulting in an affirmance of the findings of the lower court.

The views held by the supreme court of errors are indicated in the following extracts from its opinion as delivered by Judge Prentice:

The contention between the parties becomes primarily resolved into one as to whether the conceded confederation of the defendants through which the payment was obtained was an unlawful one by reason of the unlawful character of either its object or the means employed. The defendants say that the object was the ultimate object of the union, to wit, among other things, the promotion of the welfare of its members and the advancement of their rights and privileges as laboring men, or, if not that, the freeing of themselves from the competition of those not members of the union, or, if not that, and the object is to be brought into closer relation to the matters in controversy, the compelling of “unfair” bosses to become “fair.” The plaintiff finds the object sought in the immediate injury attempted to be inflicted upon him—the extortion of the one hundred dollars from him as the price of his freedom from harassment in the marketing of his product. The question before us thus becomes narrowed down to the single inquiry as to whether or not the defendants in the pursuit of their object, whether it be regarded as their general welfare as laboring men, or the diminution of outside competition, or the enlargement of their field of opportunity by increasing the number of employers of union labor only, used unlawful means.

The salient facts in the story spread upon the record are that this defendant association through their representative, the defendant Butler, demanded of the plaintiff the payment to them of a sum of

money upon the threatened alternative that, if payment was refused, he would by their action in refusing to handle his product in their work then in progress be annoyed and harassed in the enjoyment of the benefit of the market for that product which he had obtained, and in all probability be wholly deprived of that market. The action thus threatened was within the power of the defendants to take. The consequences which would flow to the plaintiff from it, if taken, were such as might well excite in him a reasonable apprehension of serious injury. To the pressure thus brought to bear upon him he yielded and paid the sum exacted. There is nothing in the record to relieve this picture. It does not improve it to say that the defendants were seeking to enforce a penalty or to collect damages assessed. They had no right to inflict a penalty upon or assess damages against this man, who owed them no duty through association in the membership of the union, by contract or otherwise. The plaintiff owed them nothing. To overawe him into the payment of something by means of threats of injury in their power to inflict and of such a character as to naturally arouse a reasonable apprehension of serious consequences to him, in the event of his refusal, was an act of the purest extortion, using that word in its widest meaning, by means of threats and intimidation, and in the plainest violation of our statute (Gen. St. 1902, sec. 1296), our decisions, and the universally accepted principles of the common law. (*State v. Glidden*, 55 Conn. 46, 8 Atl. 890, 3 Am. St. Rep. 23; *State v. Stockford*, 77 Conn. 227, 58 Atl. 769.) [See Bulletin No. 57, p. 681.] The statement of what the defendants undertook to do easily discloses that this is not the ordinary case found in the books involving the exercise by trade, capital, or labor combinations of claimed powers in their struggles for success. These cases have not infrequently called for the determination of nice legal questions, and the application of doctrines which, while they might be pertinent to the present situation, are wholly unnecessary for the decision of the simpler question before us. The most elemental principles of justice and right which have by universal consent been adopted into the common law suffice for a conclusion that money can not be lawfully exacted of a man in the manner here successful. We are aware of no case where in the progress of a labor or trade controversy a similar attempt to extort money as the price of forbearance from threatened injurious action has ever come before the courts, save that of *Carew v. Rutherford*, 106 Mass. 1, 8 Am. Rep. 287, where the attempt is characterized as a species of annoyance and extortion which the common law has never tolerated.

It is attempted to justify the action of the union in its money demand upon the proposition that, as its members had the right to decline to handle the plaintiff's brick, they had the right to waive the exercise of that right upon such conditions as they might impose. The proposition is that money demanded and obtained as the price of forbearance from the commission of an act of injury, even when the commission of that act is held over the man to coerce and intimidate him into compliance with the demand, is lawfully obtained, if the threatened act was one which the threatener might lawfully do. Such a proposition could oftentimes be used to justify the vilest black-mailer, and is palpably unsound, in that it ignores certain elements which may be present to convert the proceeding into a wrong or a crime.

It is further said that the action of the defendants was justified in the exercise of the rights of fair trade competition. If it be assumed that these journeymen, bricklayers, and this brick manufacturer whose business touched each other, only in that the latter sold brick to persons for whom the former worked, are to be regarded as trade competitors, so that the recognized doctrines applicable to such competitors are applicable to them, it yet remains that the means resorted to in this case would not be permitted.

PAYMENT OF WAGES—BIWEEKLY PAY DAY—LAWFUL MONEY—PENALTY FOR NONPAYMENT—ATTORNEY'S FEE—CONSTITUTIONALITY OF STATUTE—*Seeleyville Coal and Mining Company v. McGlosson*, Supreme Court of Indiana, 77 *Northeastern Reporter*, page 1044.—Jacob McGlosson sued in the circuit court of Vermilion County for wages due, penalty, and attorney's fee, and from a judgment in his favor the defendant company appealed. The action was based on sections 1 and 4 of an act, page 13, Acts of 1887 (sections 7065, 7068, Burns' Ann. St., 1901), which provide for payment every two weeks, in lawful money of the United States, of wages due employees in mines and factories, with the further provision that if such payment is not made within ten days after demand a penalty of one dollar for each succeeding day shall accrue, not, however, in excess of double the original debt, which, together with a reasonable attorney's fee, shall be recoverable in a civil action.

Judgment was for an admitted sum due as wages, for twice that sum as penalty, and for an attorney's fee of \$50. The company contended that the provisions relative to the penalty and fee were unconstitutional, which contention was denied by the supreme court, and the ruling of the court below was affirmed.

From the opinion of Judge Jordan, who spoke for the court, the following quotations are presented as setting forth the conclusions on each point involved:

Counsel for appellant argue that, if this action is founded on the act of 1887, supra (sections 7065 and 7068, Burns' Ann. St. 1901), which we have hereinbefore set out, then they contend that it can not be maintained, for the reason asserted that all the laws fixing the time of payment of wages due to laborers are in conflict with the constitution of this State. It is contended that the invalidity of the provisions of the act of 1887 herein involved is settled by the decisions of this court in *Republic Iron, etc., Co. v. State*, 160 Ind. 379, 66 N. E. 1005, 62 L. R. A. 136. [See Bulletin No. 48, p. 1118.] The argument is further advanced that the act of 1887, providing for bimonthly [biweekly] payment of wages by the corporations, associations, etc., therein mentioned, is a violation of section 23 of our bill of rights, which declares that "the general assembly shall not grant to any citizen, or class of citizens, privileges or immunities which, upon the same terms, shall not equally belong to all citizens." The case at bar can not, as insisted by counsel for appellant, be ruled by the decision

in *Republic Iron, etc., Co. v. State*, supra. The statute in controversy in this latter case and the one herein involved are materially different. The distinction between the two acts is palpable. The invalidity of the statute involved in *Republic Iron, etc., Co. v. State*, supra, was, by this court attributed to the fact that the act deprived both the employer and the employee in all lines of labor of the right to contract for employment, except upon the condition that the wages earned by the employee should be paid weekly. The right of the legislature to reasonably, or to a limited extent, regulate the payment of wages, as is done under the statute in the case at bar, was not in that appeal denied by the court. It will be observed that the act of 1887 does not profess to restrict or abridge the right of contract, except as against its express requirement that the amount due the employee for labor shall be paid in lawful money of the United States. This is the only express provision thereof which prohibits the right to contract. The constitutional validity of this provision of the act was fully sustained by this court in *Hancock v. Yaden*, 121 Ind. 366, 23 N. E. 253, 6 L. R. A. 576, 16 Am. St. Rep. 396. * * * The statute is general and uniform, and operates upon all persons who come within the class to which it applies. Under the circumstances it can not in reason be asserted that the act in question, in violation of section 23 of the bill of rights, either directly or indirectly, grants privileges or immunities to any citizen or class of citizens which upon the same terms do not belong to all.

Under the provisions of section 1 of this statute the employers therein mentioned are required to pay each of their employees the amount due him for labor at least semimonthly. This requirement to pay at the time prescribed by the statute only becomes mandatory upon the employer on the demand of the employee to whom the wages are due and owing. His right under the law to semimonthly demand the amount of wages then due him is a matter wholly optional with him. It is a right which he may exercise or not as he chooses. In no manner does the statute require him to exercise this right against his own free volition. The laws enacted by the legislatures of several of our sister States, requiring a certain class of employers of laborers to pay them at stated times and prohibiting the payment in anything other than lawful money, have been assailed in the courts as unconstitutional with varying success.

As to the provision for a penalty and attorney's fee, Judge Jordan said:

The statute in this respect is reasonable and the amount of the exemplary damages assessed can neither be said to be excessive nor oppressive. It is manifest that, if the delay in paying after the expiration of the ten days allowed is short, then, consequently, the damages to be assessed will be small. The employer is in a position to prevent the assessment of these damages by either paying or tendering the amount actually due the employee before the expiration of the prescribed limit. The essential purpose of the legislature, under the circumstances, in providing for the assessment of these damages, was to enforce the performance of the duty enjoined upon the employer to pay his employee the amount of his earnings, or wages, within ten days after demand is made for the payment thereof.

According to the statute the additional amount of damages authorized to be assessed over and above the actual amount of wages due is regulated or measured at the rate of \$1 for each day which the employer allows his default in payment to continue beyond the prescribed limit. The power of the legislature, under the circumstances, as mentioned in the statute, to allow damages of the character and nature of those in question, is fully sustained by the decisions of the higher courts. [Cases cited.] The validity of the provision of section 4, authorizing the assessment of a reasonable attorney's fee as a part of the damages in the action instituted by the employee to recover the wages due him, is fully sustained.

We find no error, and the judgment of the lower court is therefore affirmed.

PROTECTION OF EMPLOYEES AS MEMBERS OF LABOR ORGANIZATIONS—CONSTITUTIONALITY OF STATUTE—*People v. Marcus*, Court of Appeals of New York, 77 Northeastern Reporter, page 1073.—Harry Marcus was convicted of compelling an employee to agree not to join or become a member of a labor organization as a condition of securing employment, in violation of section 171a of the penal code. On appeal, the appellate division of the supreme court overruled the judgment of the court below, on the ground that the section named is unconstitutional. This judgment was, on further appeal, sustained by the court of appeals, Judge Bartlett dissenting.

The reasons of the court for holding this section unconstitutional appear in the following extract, quoted from the opinion of Judge Chase, who spoke for the court:

In the case now before us the mandate of the statute is the substantial equivalent of an enactment that a person shall not make the employment or the continuance of an employment of a person conditional upon the employee not joining or becoming a member of a labor organization. There is nothing in the information upon which the warrant against the defendant was issued to show that there was any interference with the freedom of Scheinbaum in deciding whether he would enter into the contract with the corporation. The courts of this State recognize the right of employees and employers to organize and cooperate for any lawful purpose. Contracts for labor may be freely made with individuals or a combination of individuals, and so long as they do not interfere with public safety, health or morals they are not illegal. The views of this court as to what constitutes freedom to contract in relation to the purchase and sale of labor and as to what contracts relating thereto are lawful and enforceable, were stated with much detail and ability by the members of the court when the cases of *National Protective Association v. Cumming*, 170 N. Y. 315, 63 N. E. 369, 58 L. R. A. 135, 88 Am. St. Rep. 648 [See Bulletin No. 42, p. 1118], and *Jacobs v. Cohen*, 183 N. Y. 207, 76 N. E. 5 [See Bulletin No. 64, p. 896], were decided, and the decisions in those cases are substantially controlling in the determination of this appeal.

In *National Protective Association v. Cumming*, supra, it was said that a person may refuse to work for another on any ground that he may regard as sufficient, and the employer has no right to demand a

reason for it, but even if the reason is that the employee refuses to work with another who is not a member of his organization, it does not affect his right to stop work or to refuse to enter upon an employment. The converse of this statement must be true, and an employer of labor may refuse to employ a person who is a member of any labor organization or he may make an employment conditional upon the person employed refraining from joining or becoming a member of a labor organization. It is a well-known fact that combinations of employees and also of employers require their members to do or refrain from doing many things which they deem to their individual and combined advantage, while a person not a member of such an organization can act in accordance with the terms of such agreement as he may choose to make. A person employing labor may decide that it is to his advantage to employ only union labor, and be willing to enter into an agreement necessary to procure such labor or he may decide that it is to his advantage to employ nonunion labor, in which case he may also decide that it is to his advantage to make the employment conditional upon an agreement that such employee will not join or become a member of a labor organization.

That freedom to contract which entitles an employer to make by agreement his place of business wholly within the control of a labor union entitles him, if he so desire, to require of his employees that they be wholly independent of any labor union.

The order of the appellate division should be affirmed.

TRADE-MARKS OF TRADE UNIONS—CONSTRUCTION OF STATUTE—*Lawlor v. Charles H. Merritt and Son, Supreme Court of Errors of Connecticut, 63 Atlantic Reporter, page 639.*—Martin Lawlor, as secretary of the United Hatters of America, an unincorporated association of workingmen, brought action against Merritt & Son, manufacturers of hats, to obtain an injunction and damages for attaching to the hats made by them an imitation of a union label.

General Statutes of Connecticut, sections 4907 et seq., provide that labor unions may adopt and register a label or trade-mark announcing that the goods to which the label is attached were made by a member or by members of such unions. Penalties are fixt for wrongful use, imitation, etc., and provision is made for the recovery of damages and the awarding of injunctions to prevent further violations of rights. Under this statute the superior court of Fairfield County had granted the injunction prayed for, over the defendant company's demurrer, from which the company appealed and procured a reversal.

The label offered in evidence by the plaintiff, Lawlor, as being the one that was infringed upon or counterfeited, besides a small reproduction of the label of the allied printing trades, bore only the words, "The United Hatters of North America. Union Made. Registered." One of the points in the demurrer filed by Merritt was that the label "does not announce that the goods to which such label or trade-mark is attached were manufactured by a member or members of the

United Hatters of North America." On this point Judge Baldwin, speaking for the court, said:

The plaintiff has no right of action except by virtue of the statute on which he professes to sue. It was therefore necessary to bring his case within the terms of the statute. That statute protects in favor of such an association as the United Hatters of North America a label announcing that goods to which it may be attached were manufactured by a member or members of the association. The label in respect to which protection is sought by this action contains no such announcement. If it could be construed as announcing in any way who manufactured the hats to which it might be attached, the announcement would be that they were manufactured by the United Hatters of North America. The complaint, however, shows that such was not the intended meaning of the words used, for the recital of the objects for which the association was formed discloses that they do not include the manufacture of hats, and it is alleged that the label was adopted "for the purpose of announcing to the public that hats bearing said label were made by the members of the association," and is issued for the use of certain hat manufacturers who employ its members in making and finishing hats.

Judge Baldwin then continued as follows:

It appears that the association is not, and never was, a manufacturer of hats; that its members do not own the hats made by them; that its label was originally adopted and registered by the Cooperative Hat Company, which was at that time engaged in the manufacture of hats in this State; that it was assigned to the United Hatters of North America; that the latter allows its use only by manufacturers employing exclusively union labor; that it has extensively advertised and represented to the public that this label is used only on hats manufactured in union factories conducted under certain rules prescribed by the association, calculated to insure good sanitary conditions and good work; that in a few cases its use has been allowed on hats made in nonunion factories not conducted under those rules, when, before the hats went out of the factory, it had become a union factory; and that the defendants, in adopting and using their labels, had no intention of deceiving or defrauding the public or the association or its members, nor of counterfeiting its label, and have never represented hats, to which they were affixed, to be hats containing the label of the association. So far as the facts found vary from the facts alleged, they tend to weaken the plaintiff's case, by showing that the association has sometimes allowed the label to be used in hats not even made by its members, although sold by a union manufacturer, and that the defendants have been guilty of no fraud. That the label of the United Hatters of North America has never been used nor intended for use on hats manufactured by the association remains clear.

The statute on which the plaintiff sues was designed to create both a new right of action and a new cause of action. (*Tracy v. Banker*, 170 Mass. 266, 49 N. E. 308, 39 L. R. A. 508.) Neither at common law nor by the general principles of equity was a man entitled, at least in the absence of actual fraud, to protection in the exclusive use of a label for goods, unless it were one which he was using to distinguish some visible commodity owned or traded in by him. This was equally

true of an association of men. When, therefore, a voluntary association of workmen calling itself the "Cigar Makers' International Union of America" adopted a label for use on cigar boxes by manufacturers employing its members to make cigars, announcing that the cigars within were "made by a first-class workman, a member of the Cigar Makers' International Union of America, an organization opposed to inferior, rat-shop, cooly, prison, or filthy tenement-house workmanship," it was held by the courts that its fraudulent imitation could not be enjoined at the suit of a member of the association, neither he nor it being a cigar manufacturer. (*Weener v. Brayton*, 152 Mass. 101, 25 N. E. 46, 8 L. R. A. 640.) In a suit by a member of that association who was a cigar manufacturer, an injunction was awarded against a defendant guilty of actual fraud. (*Carson v. Ury* (C. C.) 39 Fed. 777, 5 L. R. A. 614.) Under Gen. St. 1902, section 4907, a label of such a kind became the proper subject of equitable protection, and any member of the association owning it (although neither he nor the association might be a manufacturer or owner of the goods to which it was attached, nor a dealer in them) was invested with a right of action. But the label on which the plaintiff relies in this action is one of a very different character. Instead of announcing that the hat to which it may be affixed has been manufactured by a member or members of the United Hatters of North America, if it announces anything as to its origin, it is that it was manufactured by the association itself. It was not, therefore, such a label as can support his action. His complaint should have been held to be insufficient.

DECISIONS UNDER COMMON LAW.

BOYCOTT—INJUNCTION—VIOLATION—EVIDENCE—*Huttig Sash and Door Company v. Fuelle et al.*, *United States Circuit Court, Eastern District of Missouri, Eastern Division*, 143 *Federal Reporter*, page 363.—The Huttig Sash and Door Company was a corporation in the city of St. Louis, engaged in the manufacture of woodwork for interior furnishings of houses, and had employed a considerable number of men, some of whom were members of labor unions, while others were not. Fuelle and others, defendants in the present case, were members of the Carpenters' District Council of St. Louis, and business agents and representatives of the United Brotherhood of Carpenters and Joiners. The effort was made by the unions to compel all woodworking firms in the city and county of St. Louis to unionize their shops, those that refused to do so being classed as unfair and notices to that effect distributed.

Contractors were informed that unless they restricted their dealings to the so-called fair shops, the union men in their service would be called off, and contracts were entered into with a number of contractors and builders by which they agreed to purchase materials of indicated "fair" establishments only. The Huttig Company refused to unionize their factory, and secured a temporary restraining order enjoining the defendants from boycotting it, and from giving

notice, verbally or written, either in person or thru the agency of others, to any person, firm, or corporation to decline to purchase materials of any sort from it, under threats that if such purchases were made they would cause the employees of the persons thus notified to withdraw from service. Interference with the employees of such contractors was also enjoined, together with other modes of enforcing the boycott.

On complaint that the injunction was being disregarded, a master in chancery was instructed to take testimony, and report facts and conclusions. By this means it was ascertained that the defendants had procured one Bohnen to come from New York to aid in unionizing shops; and that, beginning with August, 1905, lists were regularly issued showing what establishments were fair, and urging contractors to avoid trouble by patronizing only the enumerated establishments. Solicitations of contracts, and threats of difficulty unless they were signed, were shown to have continued, all of which was construed by the master in chancery as being in violation of the injunction. Judge Trieber, speaking for the United States circuit court, approved this finding, as appears from the following quotation from his opinion:

The granting of the restraining order, and thereafter the refusal of the court to dissolve it, were judicial determinations that the concerted action of this organization in attempting to compel manufacturers to "unionize" their business, and to effect such purpose by sending out circulars threatening parties who purchase the products of complainant with strikes, is unlawful and should be enjoined. As long as the injunction is in force, it is the duty of everyone to obey it implicitly, and any violation thereof by direct or indirect methods is a violation of the order of the court, which must be promptly put an end to, or it will bring the courts into contempt. These principles of law are elementary and require no citation of authorities. What would be the object of appealing to the courts for redress if its orders could, without fear of punishment, be disregarded? It is a mistaken idea to suppose that parties can resort to subterfuges and thereby successfully evade the orders of a court of justice.

As found by the master, as well as the court, defendants, for more than fifteen months after the granting of the restraining order, abstained from sending out any circulars threatening contractors and builders who should use materials bought from mills not on these lists and therefore to be classed as "unfair to labor" with strikes or refusals on the part of its members to handle such material. This compliance and obedience to the order of the court shows conclusively that the defendants understood and knew the meaning and object of the restraining order. Evidently some of the members of the council were dissatisfied with this condition, but, instead of appealing to the court for a modification of its order, or appealing to a higher court, which, under the acts of Congress, might have been done without waiting for a final decree, and upon such appeal could have secured a speedy hearing, as the act specially provides that such appeals "shall take precedence in the appellate court" (Act Feb. 18, 1895, c. 96,

28 Stat., 666, [U. S. Comp. St. 1901, p. 550]), they applied to the chief officers of their organization for aid and advice to enable them to carry out the objects which this court had restrained them from seeking to accomplish. It was for that purpose that Bohnen, one of the national organizers, came from New York to St. Louis in June, 1905. After remaining a few days he left the city, returning in July, and almost immediately thereafter the August booklet was circulated among the contractors and builders of St. Louis. No one will contend for a moment that these booklets were not for all practical purposes the same as the circulars sent out by the defendants prior to the institution of this action, and the circulation of which was restrained by the court. These booklets contained a list of the firms and dealers who were working under an agreement with the district council and a notice that any material not constructed under strict union conditions would not be handled by members of that union. As the lists in these booklets comprise all the firms whose materials may be handled without danger of a strike, it follows as of course that all firms engaged in the manufacture of these articles in St. Louis whose names are not therein mentioned are "unfair," and that their products will not be handled by union artisans.

All of the respondents participated, not only in publishing and circulating these booklets, but in attempting to induce contractors and builders to comply with their requests by entering into solemn contracts not to use any material from any but union firms, which, of course, excluded complainant, as its name did not appear on any of the lists.

The only defense attempted is that verbal notice was always given by the respondents to the contractors and builders that, owing to the injunction issued in this cause, complainant was not included among the "unfair" firms, and dealings with it would not be punished with a refusal to handle its material by union men. But the evidence establishes beyond a reasonable doubt that this fact was never mentioned to any contractor or builder unless he made special inquiry on the subject. Is it reasonable to suppose that every one of the several hundred contractors, builders, owners, and architects to whom these booklets were sent would make such inquiry about this particular firm, when there are many others engaged in the same business whose names did not appear on the council's lists and for this reason are supposed to be "unfair?" If any of the contractors, builders, architects, or owners to whom these booklets were sent had been advised that complainant was not included, without their making special inquiry on the subject, it would have been an easy matter to have produced them as witnesses. If the intention of respondents was to obey the mandate of the court—not only its letter, but its spirit—it would have been a very easy matter to have inserted the facts relating to complainant in their circulars or booklets. Their failure to do so must satisfy any reasonable person that the respondents violated the order of the court, and did it after calm and due deliberation.

For these reasons, the findings of the master that all of the respondents are guilty of violating the restraining order issued in this case must be affirmed.

LABOR ORGANIZATIONS—BOYCOTT—LAWFUL PERSUASION—INJUNCTION—*Bender v. Local Union No. 118, Baker and Confectionery Workers' Union, et al., Supreme Court of the District of Columbia, 34 Washington Law Reporter, page 574.*—This case was before the court on the complaint of John Bender, a baker, who sought to secure an injunction against the defendants to restrain them from interfering with his business, and particularly from instituting and maintaining a boycott against him. Bender had for some years previously conducted a union shop, but in April, 1905, decided to employ workmen without regard to their membership in labor organizations—in other words, to conduct an “open shop.” Efforts were made to get Bender to come before a committee of the union, on the failure of which he was declared “unfair to organized labor,” this action being indorsed by the Central Labor Union of the District of Columbia, one of the defendants in the case. Circulars were subsequently issued by the Bakery Workers' Union, calling on all friends of organized labor to withhold their patronage from Bender; also giving a partial list of his patrons and calling on their friends to refuse to deal with them so long as they should continue to buy goods of Bender. In this action the Central Labor Union claimed it had no part. Bender claimed that the distribution of the circulars and other forms of boycott were injurious to him and were unlawful, and asked for the injunction as stated, which was refused.

Judge Stafford, who announced the rulings of the court, first set forth in brief the contentions of the parties, and continued in part as follows:

It is evident from the answers themselves that there is here a combination between the defendants to accomplish a certain purpose. What is that purpose? The plaintiff says it is to compel him to employ only union men by injuring his business and by keeping before his eyes the prospect of ruin to his business as the alternative to his complying with the defendants' demands. He says this is the immediate purpose of the combination although it may have a remote and ultimate purpose in the expectation of improving the condition of union men. Consequently, he says the purpose is unlawful. On the other hand, the defendants say that such is not their purpose. They fail, however, to state what the purpose of the combination is. They assert their right to combine to divert patronage from the plaintiff to the friends of organized labor, but they nowhere state what the object and purpose is. What can it be except to demonstrate to the plaintiff that he can not conduct a profitable business with nonunion help, and thereby compel him to employ union help instead? No other rational explanation of the conduct of the defendants can be found.

The plaintiff had an acknowledged right to employ nonunion men if he chose. The defendants are attempting to compel him to give up that right and submit to employ only union men. Is that a lawful purpose? The interest which the defendants have in the question is that if only union men can be employed union men can insist on

higher wages than they could insist upon if nonunion men as well as union men could be employed. They have an interest to keep up the rate of wages. If one manufactures a certain brand of flour it will be for his interest to convince dealers in flour that they can not afford to be without his brand. It might even be for his interest to convince dealers in flour that they could not afford to deal in any other brand. If he could persuade all consumers of flour to buy only his brand he could compel dealers to buy only his brand for sale, however much the dealers might prefer to sell some other brand. Now, if instead of there being one controller of this brand there were several, and they should all combine to compel dealers in flour to buy only their brand, that would be a perfectly lawful purpose, provided they should accomplish it only by lawful means. For instance, they might call upon all who had occasion to purchase flour from the dealers to assist them by declining to purchase any other flour, and, if their appeal proved effectual, the end would be accomplished without transgressing the law. Now, if a union has labor to sell and wishes to compel employers of labor to use no other, why may it not lawfully entertain the purpose of compelling employers of labor to employ only union labor, provided it can accomplish its purpose by lawful means? For instance, why may it not call upon all who have occasion to purchase the products of labor to refuse to purchase the product of any other labor? If it can persuade the purchasing public not to purchase the product of any other labor it will certainly compel employers of labor to employ no other labor however much they may wish to do so. And how does labor in the instance now given differ from flour in the instance given a moment ago? What is there unlawful either in the purpose to be accomplished or in the means taken to accomplish it? The course of competition is full of instances of lawful compulsion. Men are being constantly compelled to do what they do not wish to do, and what they have a perfect right to refuse to do, because they find that they can not otherwise conduct their business to a profit. Now, when John Bender refused to employ the union on its terms, was there anything unlawful in the union calling upon the purchasing public to refuse to purchase the product of any labor except that of the union? The whole effect of the appeal depended on the good will of the public. Was it anything more than calling public opinion to its aid? Up to the point which we have now reached there was no intimidation. There was no threat, unless it be a "threat" to refuse to bestow patronage and to call upon one's friends to do the like by way of assisting the one who makes the appeal. If the public believed that the cause of organized labor deserved encouragement it would probably respond. It might respond in order to secure the good will and patronage of those who made the appeal. If so, it would only be one of countless instances occurring daily where A patronizes B in the hope that B will patronize A.

But in the case at bar the union went a step further. It undertook to convince the plaintiff's customers that it would be more profitable for them to acquire or retain the patronage of union men and union sympathizers than to deal with the plaintiff. Accordingly, it called upon the public to refrain from dealing with the plaintiff's customers. This, of course, was directed to the accomplishment of the same purpose, namely, to compel the plaintiff to employ only union men; that

is, to convince him that his course in employing nonunion men would be commercially unprofitable. The purpose was to convince him that union men and union sympathizers were so numerous and so strongly attached to the cause of organized labor that his customers would leave him for those who were in sympathy with the union. What is there here beyond an appeal to the self-interest of the plaintiff and the self-interest of his customers? There is no attempt to coerce either unless it be "coercion" to convince one that his financial interest will not permit him to do what he desires to do. We sometimes hear it said that one in business has a right to have business flow to him without interruption, but that certainly can not be true in its broad and sweeping terms. It can only mean that he has a right to have it flow to him without unlawful interruption, and the question still remains what is unlawful. The principles governing the question may, perhaps, be more easily apprehended by simplifying the situation. Suppose A to be the baker, the manufacturer and employer. Suppose B to be his workman, and suppose him to have but one. Suppose C to be one who desires to be employed by A in place of B. Suppose D to be a customer of A, and suppose that A has only this one customer. Now, suppose that C, wishing to be employed by A in place of B, says to A: "If you will not employ me in place of B, I will buy none of your goods." Is there anything unlawful about that? If C is a labor union consisting of 20 men, is the principle different? Suppose further that C says to D: "If you continue to trade with A, I shall withdraw my patronage from you." And suppose C does this knowing that D is A's only customer, and that the result will be financial ruin to A, and that the purpose of C is thereby to bring A to terms, and compel him to employ C instead of B, has he not a right to do this? Are not just such transactions every day occurrences, and is there ever any question about their legality? In all such cases the party upon whom the pressure is brought to bear weighs the commercial advantage of the different courses of action, and decides according to his own interest. Such is the whole course of trade. Now, does it make any difference in principle that B, C, and D instead of being single individuals each represents a hundred individuals? The purpose to be accomplished not being in itself unlawful, the means used not being unlawful when employed by one person alone, does the transaction become unlawful by reason of the bare fact that instead of one person acting alone two or more persons are acting in concert? It is said that there is a power in numbers which does not exist in the individual, and that consequently the same thing may be unlawful when done by a combination which would be lawful when done by an individual, and that consequently it is the combination itself which constitutes the unlawful element. But is this quite correct? It is easy to see that a great number of persons acting together may give an appearance of force and power which would have the effect to intimidate when one person acting alone would not be able to intimidate. But in that case there is intimidation by force of numbers, and wherever there is intimidation the law is overstepped. But does it make any difference, where the purpose to be accomplished is legal and the means employed are legal, that many persons, instead of one, are seeking to accomplish the legal act by legal means?

It may be true that in the case at bar the defendants expected to accomplish their purpose of unionizing the plaintiff's shop by making it manifest to him that he must unionize it in order to make it a financial success. That was the means by which they expected to accomplish their purpose, but they had a legitimate personal motive for their action in the desire to secure employment for themselves and their fellow-members with whom they were making common cause. It can not be said that only those individual members of the union who might hope to be employed by the plaintiff had a proper motive in what was done. The union as a whole made contracts for its members and settled the terms of employment with employers, and each one of the members of the union had an interest in the terms upon which the plaintiff should employ members of the union. They were all acting together for their common interest.

Judge Stafford then referred to the lack of harmony in the various decisions examined by him and, continuing, said:

After all, it is a question of individual liberty. It is such a principle that the plaintiff invokes, and it is upon such a principle that the defendants rely for their defense. The plaintiff has a right to conduct his business in his own way without coercion, without intimidation, exactly as he shall conclude it is for his own interest to act. The defendants jointly and severally are entitled to the same privilege. They have a right to sell their labor to whom they will and to withhold it from whom they will. They have a right to patronize whom they will and to withhold their patronage from whom they will. It seems to the court that they have a right to call on their friends and sympathizers to withhold their patronage from one who refuses to employ them, their friends and sympathizers being left free to answer the appeal as they believe their own interests to dictate. So long as all parties concerned are left free to follow their own choice as they decide their self-interest dictates, it seems to the court that there has been no infringement upon the personal liberty of anyone. Apparently, the question here to be decided has not been passed upon in any reported case in this jurisdiction, and the authorities elsewhere being in conflict this court has felt at liberty to adopt the view which seems to it fundamentally correct. Entertaining these views, it will be necessary to refuse the temporary injunction upon the case made by the pleadings.

LABOR ORGANIZATIONS—CONSPIRACY—COERCION—INTERFERENCE WITH PROPERTY RIGHTS—INJUNCTION—DAMAGES—*Purvis et al. v. Local No. 500, United Brotherhood of Carpenters and Joiners et al.*, Supreme Court of Pennsylvania, 63 Atlantic Reporter, page 585.—J. L. Purvis and L. O. Purvis, manufacturers of millwork for buildings, had procured from the court of common pleas of Butler County a decree of injunction and an award of \$1,770 damages against the labor union above named and others in privity therewith. The defendants appealed, with the result that the action of the court below was affirmed. The facts are not stated except as they appear in the

opinion or are indicated in the injunction. The injunction was in part as follows:

That the defendants (not including L. C. Wick) and each and every of them, their officers, committees, agents, employees, servants, members, associates, and all others that may act in concert with them, or by their direction, each and every one, be restrained and strictly enjoined from interfering and from combining, conspiring, or attempting to interfere, for the purpose of doing injury to plaintiffs in their business, with the sale or contract for sale by the plaintiffs of building materials by representing or causing to be represented in express or implied terms to any customer of the plaintiffs, or to any person or persons or corporation who might become customers of the plaintiffs, that such customers will suffer or are likely to suffer loss or trouble in their business for purchasing or continuing to purchase or contracting for the purchase of building materials from the plaintiffs; * * * or from sending out to any person or persons or corporation who are now customers or who may hereafter become or desire to become customers of the plaintiffs, through the mails, or delivering to them otherwise, any written or printed card, letter, circular, or other notice, stating that members of the United Brotherhood of Carpenters and Joiners will not handle or work millwork or materials coming from mills which fail to comply with regulations of the Carpenters' District Council and that the plaintiffs had failed to comply with an agreement of the Planing Mill Association of Western Pennsylvania with the Carpenters' District Council, or an agreement adopted by the Master Builders' Association and said council, and requesting such customers or prospective customers of the plaintiffs to have their millwork done by mills that operate under said agreement so that no controversy can arise on account of nonunion millwork, or from sending out to such customers or prospective customers of the plaintiffs any card, circular, or other notice of similar character or purpose, directly or indirectly, or from writing or sending through the mails or otherwise, any written or printed card, circular, letter, or other communication, conveying or intending to convey, to any customers or prospective customers of the plaintiffs that the plaintiffs are under the ban of local No. 500, United Brotherhood of Carpenters and Joiners of America, or the Carpenters' District Council of Pittsburg, Allegheny, and Vicinity, United Brotherhood of Carpenters and Joiners of America, or other trade unions, or of similar import; * * * or from interfering and from combining, conspiring, or attempting to interfere, for said purpose, with the business of the plaintiffs, by the enforcement, under pain of penalties and forfeitures, of rule 7 of the working rules adopted for the government of local unions under the jurisdiction of the Carpenters' District Council of Pittsburg, Allegheny, and Vicinity, United Brotherhood of Carpenters and Joiners of America, which provides that: "No member shall be allowed to work any material coming from any nonunion mill and shall comply with this rule when the local unions are so informed and instructed by the district council," or by other like coercive rules, the natural and necessary effect of which would be to deter the members of said trades unions or others from working upon buildings or other constructions to which the plaintiffs were furnishing materials, or contractors, builders, or owners of said buildings or other constructions, or others, from purchasing materials from the

plaintiffs; or from interfering, combining, conspiring, or attempting to interfere with the business of the plaintiffs for the purpose of injuring them in their business, by the enforcement of fines or forfeitures, suspension or expulsion from membership in any of the locals within the jurisdiction of the Carpenters' District Council of Pittsburgh, Allegheny, and Vicinity, United Brotherhood of Carpenters and Joiners of America, for failure to observe rule 7 of the working rules adopted for the government of local unions under the jurisdiction of said Carpenters' District Council of Pittsburgh, Allegheny, and Vicinity, United Brotherhood of Carpenters and Joiners of America, or for failure to observe any of the rules adopted and in force in that union, or that may hereafter be adopted, which would by coercion of said members interfere with the business of the plaintiffs, or from otherwise restraining, coercing, or intimidating any one or more of the members of said union for said purpose from working for any contractors, builders, owners, or other persons because they are doing or desire to do business with the plaintiffs; or from interfering and from combining, conspiring, or attempting to interfere with the business of the plaintiffs by the issue of union labels to any mill within the jurisdiction of the Carpenters' District Council of Pittsburgh, Allegheny, and Vicinity, United Brotherhood of Carpenters and Joiners of America; such issue of labels being made for the purpose of interfering with the business of the plaintiffs.

The opinion of the supreme court was delivered by Judge Brown, from whose remarks the following is quoted:

The zeal of counsel may account for, but can hardly excuse, the statement in appellants' paper book of the questions involved on this appeal. They are there stated to be: "Is the dissemination by means of printed notices by a lawfully constituted lodge of union laborers to its members and employers of labor, of its adopted rules by virtue of its constitution forbidding its members to work nonunion material, an unlawful conspiracy? Is it lawful by peaceful means to make effective such rules?" From an examination of the averments of plaintiffs' bill, the ample proofs submitted in support of them, and of the facts found by the court below, it is most manifest that the only question before us is whether the appellants were properly enjoined from injuring and destroying the business of the appellees, in pursuance of a conspiracy to do so, as a penalty for their refusal to unionize their mill. This would mean to the appellees, as they aver, that they would be compelled to employ only union workmen and to yield their free and unrestricted right to select their own employees in the conduct of their business; that they would be compelled to submit themselves to the control of the union, and to put themselves within its power to dictate to them the number of hours to constitute a day's work in their mill, the compensation to be paid therefor, the time of payment thereof, and the selection of their employees. It would be a recognition of the power of the agents of the union to practically control their business.

The opinion of the court below is learned and exhaustive, and upon it the decree might well be affirmed. The briefs on each side are most elaborate; but, after all, the question involved is a very simple one and calls for no lengthy discussion by us. The rights of mechanics and laborers, and of labor organizations and unions, as recognized in

innumerable cases, are not affected by the decree, and need not, therefore, be considered here. The question is the unlawfulness of the conspiracy of the appellants to injure and destroy the property of others, if their demands as to the employment of workmen are not complied with. The question is not as to the unlawfulness of the demands which they make, but is as to their conduct upon learning that these demands are ignored by the appellees. The demands in themselves can do no harm to the latter; it results from the means employed to coerce compliance with them. The appellants contend that they seek only to persuade, and not to coerce; but their means of persuasion are the destruction of property of those whom they would persuade. As well might it be said that the sight of the club or gun of the highwayman without actual violence simply persuades. No violence was used by the appellants, and it does not appear that any was contemplated or threatened; but coercion may be accomplished without threats or violence, and the attempt to so accomplish it was made in this case.

After reciting the material facts found, the court below thus summarizes the situation: "These things all point to a combined purpose on the part of Local No. 500 and the District Council to compel the plaintiffs to unionize their mill by working injury to their business. To accomplish this the whole power of the union was brought to bear upon them, both in the Pittsburg district and the home community. The members of Local No. 500 who were found working material from their mill were coerced by the compelling power of the union to quit work on pain of trial, fine, or expulsion, with its attendant annoyances and possible ostracism, in case of their refusal. By the same power, owners, former customers, and contractors were coerced through the urgency of their circumstances to withhold their patronage, while through the conditions thus created the public was deterred, as the evidence indicates, from placing orders with the plaintiffs, which would otherwise have gone to them. Along these converging ways the whole power of the union was brought to bear upon the plaintiffs to coerce them into submission. The right of each—employer and employee—is an absolute one, inherent and indefeasible, of which neither can be deprived, not even by the legislature itself. A person's business is property, entitled under the Constitution to protection from unlawful interference. Every person has a right, as between his fellow-citizens and himself, to carry on his business within legal limits, according to his own discretion and choice, with any means which are safe and healthful, and to employ therein such persons as he may select. (*Barr v. Essex Trades Council*, 53 N. J. Eq. 101, 30 Atl. 881.) With the absolute right of the appellees in their property, the appellants assumed to interfere, and would injure, if not destroy it, if their demands are not complied with. This no court will tolerate.

As already stated, of the demands in themselves the appellees could not be heard to complain. The appellants contend that they are made for the benefit of the members of their union. This is undoubtedly so, and, if the injury resulting from a disregard of them is confined to its members, they alone can complain; and even if injury incidentally results to outsiders, through compliance by the members of the union with its rules and orders, there may be no remedy

for it. An agreement by those to be benefited by it, that they will themselves observe its terms in accepting employment, even if employers be incidentally embarrassed thereby, can occasion no injury to employers which the law will recognize, for workmen, whether bound by a compact among themselves or not, have the absolute right to give their services to whom they please, or to withhold them from whom they please, without responsibility for consequences to employers or to anyone else. But this is not the case when the primary purpose is to unlawfully coerce others that, as a result of the coercion, benefits may accrue to those who coerce. The attempt to coerce by unlawful means, by conspiring to injure and destroy property, is in itself an unlawful act, no matter what end is to be accomplished, and the concern of the law is only for the protection of those who are to be wronged. Benefits which it is alleged will result to the wrongdoers can not be considered without sanctioning the wrong, without justifying the unlawful means for the accomplishment of an end. By no specious reasoning can the conduct of the appellants be construed into anything else than a conspiracy to perpetrate wrong for the accomplishment of beneficial results to themselves.

Judge Brown then quoted from the opinion of the judge in the court below, as follows:

“It is unnecessary to multiply authorities to establish the unlawfulness of defendants’ purpose as expressed by their agents and indicated by their acts. In reaching this conclusion I do not ignore, but gladly recognize, the right of workmen and others to combine for the worthy purpose of bettering their condition. In their efforts to attain this end they may inflict more or less inconvenience and damage on others. But these results should be incidental damage and inconvenience consequent on the operation of general rules, lawful in themselves, rather than those which follow a specific intent and immediate purpose of injury to others in order that good may ultimately come to themselves. The doctrine that the end sanctifies the means has no place in a condition of society where law prevails. Even a good purpose must abide its time and follow the path marked out by law rather than hasten its accomplishment by ignoring the equal rights of others. A patient recognition of these safeguards which the law has thrown about every lawful possession, and of those limitations and restraints within which every lawful endeavor must be advanced, is the only sure way of helping on any worthy cause.

“Turning from a consideration of the nature of the purpose of defendants as indicated by their words and deeds, I desire to briefly consider the means used to effect that purpose. On part of plaintiffs it is alleged that the means used are a boycott of their business. The defendants contend that their methods were persuasive and were not accompanied with violence, threats, or intimidation. No violence was used, nor does any seem to have been contemplated or threatened. But acts may be coercive in character without threats or commission of violence or personal injury. When the District Council with its 7,000 members in the Pittsburgh district gave notice to practically all the building contractors of that district that the plaintiffs refused to run their mill in accordance with union rules,

and calling attention to the working rule which forbids union workmen to work material from any nonunion mill, the contractors understood what the request not to patronize plaintiffs' mill meant. When the members of Local No. 500, who were willingly working material from plaintiffs' mill, were visited by the business agent of the union, who called them off, they doubtless knew that it meant trial, fine, or expulsion and ostracism if they continued to work. When the owner of the Central Hotel was required, in the urgency of his situation, to sign a contract with the business agent of the union not to purchase any more material from plaintiffs as the condition of having work continued on his building, it can scarcely be said that his freedom of action was not interfered with; when the business agents of the District Council declared that they had come to Butler prepared to drive Purvis & Co. into the union, when they stated to plaintiffs there was going to be trouble if the mill was not unionized, and gave them to understand that they must unionize their mill or quit business, all parties well understood what that meant. In all these things the attitude of the defendants was threatening and coercive rather than persuasive."

Concluding, Judge Brown said:

In attempting to justify their conduct the appellants allege authority for it in the act of June 16, 1891 (P. L. 300). While that act provides that they may devise and adopt ways and means to make rules, regulations, by-laws, and resolutions of their order effective, it sanctions no rules, regulations, by-laws, or resolutions to commit wrong, and, if it attempted to do so by authorizing the appellants to interfere with the absolute rights of the appellees, the legislation would be a dead letter, for the legislature can not abolish the declaration of rights. To do that the whole people of the Commonwealth must be directly consulted, and they must give assent. (*Erdman v. Mitchell*, supra.)

In assessing the damages sustained by the plaintiffs and directing their payment no error was committed by the court. All of the assignments [of error] are dismissed, and the decree is affirmed at the cost of the appellants.

LABOR ORGANIZATIONS—OBLIGATIONS OF MEMBERS—SUSPENSION—REINSTATEMENT—DAMAGES—PUBLIC DUTIES—*Schneider et al. v. Local Union No. 60, United Association of Journeymen Plumbers, Gas Fitters, Steam Fitters, and Steam Fitters' Helpers of the United States and Canada, Supreme Court of Louisiana, 40 Southern Reporter, page 700.*—The civil district court of the Parish of Orleans had awarded a judgment of damages against the union named above, together with an injunction restraining the union from interfering with the employment of the plaintiffs at their trade, and directing their reinstatement as members of the union, with a remission of their fines. From this judgment an appeal was taken, which resulted in its affirmance in all points.

The legislature of Louisiana had past a law (act No. 194, Acts of 1902) providing for a board of examiners of plumbers for cities hav-

ing a population of 30,000 or more. This board was to be appointed by the mayor, and at least two of its members were to be journeymen plumbers. The duty of selecting a plumbing inspector for the city was, in the present instance, left with this board. Local Union No. 60 met in July, 1902, soon after the law became effective, and by secret ballot selected certain nominees for each of the positions to be filled in the city of New Orleans, submitting the same to the mayor and council of the city. The latter were not willing to approve the appointments suggested, however, and selected two other members as examiners. These members declined to serve, and subsequently, either by request of the mayor or on its own motion, the union forwarded its roster, omitting the four members indicated above, that the mayor might make his own choice therefrom. This the mayor did, selecting Stevens Schneider and Edward Schekeler, the plaintiffs in this case, as the two journeymen members of the examining board. When the question of choosing an inspector came before the board neither Schneider nor Schekeler voted for McGilvray, the nominee of the union for that position, altho formally instructed by the union to do so. The union then imposed upon each of the plaintiffs a fine of \$25 and, contingently, of \$150 if they should not vote for McGilvray. A like fine, besides expulsion from the union, was threatened against any other member than McGilvray who should accept the place of inspector.

The plaintiffs continued to ignore these acts and the union ordered their suspension, and that a penalty be assessed against any member of the union who should work on the same job with the plaintiffs. This action led to the discharge of Schneider and Schekeler by their employers and continuous loss of employment. The union was not united in this course, but efforts at a rehearing as well as an appeal by the plaintiffs to the United Association failed, and the men brought suit for damages. The loss of wages, the value of membership in the union, and the injury to feelings and reputation which they had suffered were alleged as injuries for which damages were sought. An injunction against the continuance of this boycott, remission of the fines assessed, and restoration to membership were also prayed for.

Judge Monroe stated the above facts, and said:

In addition to the facts thus stated it may be said, upon the authority of their constitution, by-laws, etc., that the declared purpose of the members of the union in effecting their organization is to protect themselves from unjust and injurious competition, and to secure, through the power of organization a steady demand and fair compensation for their labor and a position in society to which as wealth producers and citizens they are entitled. The pledge required of all initiates, and taken by the plaintiffs, is as follows:

I, —, in the presence of the members of this association, do truly promise and pledge my word of honor that I will yield obedience to

all laws and legal summons that may be sent, said, or handed to me. I will not do any act in any way prejudicial to the best interest of this association, but will at all times endeavor to promote its prosperity and usefulness. I will at all times assist members of this association to the extent of my ability, defend them when unjustly treated or slandered, and cultivate for each and every member the warmest friendship and brotherly love. I will assist unfortunate or distressed members to procure employment and to secure just remuneration. I do further promise that I will never reveal any of the signs or workings of this association that may be now or hereafter confided to me, except in a lawful and authorized manner. I take this obligation voluntarily, without any mental reservation, and bind myself until death or honorable withdrawal, under the penalty of the scorn due to moral perjury and violated honor, as one unworthy of trust or assistance.

Upon the facts thus stated (and possibly a few others which may be hereafter referred to), the judge a quo gave judgment in favor of the plaintiffs, respectively, and against the defendants, Local Union No. 60 and various named officers of said association who participated in the action complained of, maintaining the preliminary injunction which had been issued, ordering that the plaintiffs be reinstated in said Local Union No. 60, and the fines imposed upon them set aside, and condemning said defendants in solido, in favor of the plaintiff Schekeler in the sum of \$482, with interest from the rendition of the judgment, and in favor of the plaintiff Schneider in the sum of \$466, with interest. And from the judgment so rendered the defendants have appealed.

The opinion of the court was then given, from which the following is quoted:

The obligation which initiates of Local Union No. 60 are required to take is to be construed with reference to the declared purposes of the organization, and is binding on the initiate only in so far as those purposes are lawful and are to be attained by lawful means. When the union attempts the accomplishment of an object which is foreign to those purposes, or attempts the accomplishment of those purposes by unlawful means, the initiate may properly say: "I entered into no such contract." The union's rules of order specifically provide that "partizan politics or sectarian discussion shall not be permitted in the meetings under any circumstances." The introduction of a resolution committing the organization to the support of a particular political party or a particular dogma of religion would therefore be a violation of a fundamental law of the union, as construed by the union, and its adoption would impose no obligation on its members, and it must be read into those rules that the introduction of a resolution which is violative of the fundamental law of the land has no better foundation and its passage no greater effect. "The courts will not enforce an agreement the object of which is forbidden by law or is opposed to the policy of the law. * * * The following are the leading classes of agreements contrary to the policy of the law: Agreements which tend to injure the public service. Of this character is an agreement to use one's influence to secure the election or appointment of a person to a public office. [Cases cited.]" Principles of Contracts (Benjamin), pp. 89, 90.

This elementary doctrine is more fully stated in the brief of the counsel for the plaintiffs in the form of excerpts from what we take to be a recent work on Public Policy (Greenhood), as follows:

"Any contract which contemplates conduct which will amount to an imposition upon a public officer in the exercise of his discretion is void. * * * Any contract by one acting in a representative capacity, which restricts the free exercise of a discretion vested in him for the public good, is void. * * * Any contract to appoint to a public office, or involving the sale of a public office, or quasi public office, or to do anything in consideration of the promisee exchanging offices, or securing an office for the promisor, or recommending him for such office, or resigning any office, is void. * * * It is the duty of the officer, having a power of appointment, to make the best appointment in his power, at the time when he makes the appointment. The public have a right to demand this, and it is against public policy that he should be deprived of the exercise of his best judgment by a contract previously made."

Referring to Greenhood on Public Policy, pp. 336-339, 387.

If, therefore, the appointment of McGilvray, rather than of some other and perhaps more competent man, to the position of inspector, could be considered as furthering the purposes for which the defendant herein was established, nevertheless the attempt to secure that appointment, by threatening and imposing fine and suspension, in their capacity as members of the union, upon public officials charged with such appointment, was a violation of law; and this, whether those officials, as members of the union, had committed themselves to McGilvray's candidacy or not. But we are unable to concur in the view, relied on by the learned counsel for the defendant, that the plaintiffs had so committed themselves.

We infer that, as the ultimate result of its action, in July, 1902, the union suggested the appointment of Correjolle and Robinson as members of the board of examiners, and the record shows that the mayor declined to appoint them and tendered the appointments to Patterson and Ybos, who were compelled by the union to decline them. Some seven or eight months later (in March, 1903) the union sent to the mayor its roster in order to enable him to select from it, for himself, the two appointees for whom he was looking. * * * It is quite certain that the union understood that the mayor would make his own selection, and that all he needed from it was the names of its members. Under these circumstances, there was nothing for the union to do but send a correct roster, or none, since to have sent an incorrect one would have been to have practiced a fraud. The plaintiffs were therefore under no obligation to the union in that connection, as their names were on the roster as a matter of right, and not of favor, and the union in sending the roster did no more for them than it did for those members, constituting the large majority, whom the mayor did not select and could not have selected. It seems to us, then, to be illogical to argue that the plaintiffs are in the attitude of having secured their appointments as members of the board by holding out that, if appointed, they would vote for McGilvray for inspector, since it is not pretended that they so held out to the mayor, who appointed them, and the union, to whom the holding out is (erroneously, as we think), said to have been made, neither appointed them nor controlled the appointments.

Defendants' counsel earnestly contends that plaintiffs should have exhausted their remedy within the organization of which they are members. Conceding, *arguendo*, that the general rule to that effect is applicable to a case in which the organization is acting in violation not only of the law of its being, but of the law of the State, we are nevertheless of the opinion that the plaintiffs have brought themselves fairly within that rule. We find no provision for the trial of such matters as this either in the constitution or by-laws of Local Union No. 60, nor in those of the United Association, and the efforts of the plaintiffs to induce those organizations to make the necessary provision and in some way give them a trial resulted in nothing but futile correspondence and vexatious delay, with no prospect of relief from a situation which, to men dependent for themselves and their families upon their daily earnings, had become little short of desperate.

As to the damages, counsel for defendant, calculating them from the evidence, reaches the conclusion that Schneider lost in wages \$96, and Schekeler \$192, and, as the judgment appealed from awards the one defendant a total of \$466, with interest from its rendition, and the other \$482, with interest, it is said that the judgment should be amended in that respect.

The amounts thus awarded represent, however, not only the damages sustained by reason of loss of wages, but also those resulting from mental suffering and injury to reputation, and likewise included \$200 awarded to each plaintiff as punitive damages. We agree with the trial judge that his estimates are conservative, and find no sufficient reason for reducing the totals as thus allowed.

It is therefore ordered, adjudged, and decreed that the judgment rendered in the consolidated cases of *Stevens Schneider v. Local Union No. 60, United Association Journeymen Plumbers', etc., et al. and Edward Schekeler v. Same Defendants*, and herein appealed from, be, and the same is hereby affirmed, at the cost of the defendants.

LAWS OF VARIOUS STATES RELATING TO LABOR, ENACTED SINCE JANUARY 1, 1904.

[The Tenth Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor, in force January 1, 1904. Later enactments are reproduced in successive issues of the Bulletin from time to time as published, beginning with Bulletin No. 57, the issue of March, 1905. In the cumulative index, page 919 et seq., are indexed all laws found in the Tenth Special Report, together with those enacted in 1904 and 1905, and published in Bulletin Nos. 57 to 67, inclusive.]

WASHINGTON.

ACTS OF 1905.

CHAPTER 66.—*Examination, etc., of plumbers.*^(a)

SECTION 1. Any person, firm or corporation that is now or hereafter may be engaged in the business of plumbing in any city having a population of ten thousand inhabitants or more, either as master plumber or as a journeyman plumber, shall secure and hold a license therefor in accordance with the provisions of this act, and it shall be unlawful for any person to work at the trade of plumbing or to carry on the business of plumbing in any such city without complying with the provisions of this act.

SEC. 2. Within thirty days after this act shall take effect the governor shall appoint a board of plumbing examiners consisting of three members. The members of said board shall be practical plumbers well versed in modern sanitary plumbing, sanitation and sewerage. The board shall consist of two master plumbers and one journeyman plumber, and the members of said board shall serve for a period of three years each from the date of their appointment: *Provided however*, The first board shall serve as follows: One member for one year, one member for two years, and one member for three years, and the governor in making the appointment shall designate the time that each member constituting the first board shall serve. Thereafter upon the expiration of the term of office of each member of the board, or when a vacancy occurs, the governor shall make a new appointment for the full period of three years. The members of said board shall be entitled to a compensation of five dollars per diem each, for each and every day while actually engaged in the work of the board, together with their traveling expenses from city to city on business connected with their offices; the compensation, however, to be paid from the revenues realized under the provisions of this act, but not otherwise. The time and method of payment of such compensation shall be in accordance with the rules and regulations established by said board of plumbing examiners. Said board of plumbing examiners shall meet once each year in each of said cities, and notice of such meeting shall be given by publishing in each of said cities, in a daily newspaper published therein, a statement of the time and place of holding such meeting, at least ten days prior to the holding of such meeting. Said board may call special meetings in any of said cities for the purpose of holding examinations or for other business purposes as hereinafter provided whenever in its judgment it is deemed advisable. At all regular and special meetings of said board as herein provided, it shall be the duty of said board to examine each applicant for a license as provided for by this act, to determine his qualifications and fitness for carrying on his business of master plumber or journeyman plumber, and if the applicant successfully pass the examination as prescribed by the said board, then a license shall be issued to such applicant for such license, authorizing him to engage in the business and occupation of a master plumber or journeyman plumber, as the case may be, which license, when issued, shall authorize the holder thereof to carry on the business of master plumber or journeyman plumber in any of said cities.

SEC. 3. Any person, firm or corporation desiring to engage in or work at the business of plumbing either as a master plumber or as a journeyman plumber in any of said cities, shall apply to the said board of plumbing examiners by filing a written application with the secretary of the board, stating his place of residence, age, experience

^a For decision declaring this law unconstitutional, see pp. 875-877, above.

and the place where he has acquired his experience, and shall at such time and place as may be designated by said board, as herein provided for, be examined as to his qualifications for a license. In the case of a firm or corporation, the examination and issuing of a license to any one member of the firm or to the manager of the corporation shall satisfy the requirements of this act as to master plumbers, but not as to journeyman plumbers: *Provided however*, That no person shall do the work of a master plumber unless licensed as provided in this act: *Provided further*, That any duly licensed journeyman plumber may engage in the business of a master plumber without further examination, upon payment of the fee for a master plumber's license and complying with the other provisions of this act with respect to master plumbers.

SEC. 4. Said board of plumbing examiners shall within thirty days after the appointment of the members thereof meet and organize and elect a president, secretary and treasurer, and make rules and regulations that are just and reasonable and fair in the matter of time, place and method of examining applicants desiring to engage in or to work at the business or trade of plumbing in any of said cities, and for the issuing of licenses and granting of temporary permits from time of the filing of the application until the applicant has an opportunity to submit to the examination to be prescribed by the said board. Said board shall examine all applicants as to their knowledge of and experience in plumbing, house draining and ventilation, and all other subjects that in its judgment are deemed necessary and requisite to test the fitness, knowledge and experience of the applicant, and if the applicant has sufficient knowledge and experience in the matters inquired about and in the opinion of said board is competent to engage in such work or business or trade, said board shall thereupon issue a license to the applicant which shall authorize and permit him to engage in the business or trade specified in said license in any of the said cities, for the time specified in said license.

SEC. 5. No applicant for a master plumber's license shall be entitled to submit to the examination prescribed by the said board of plumbing examiners until he shall have deposited with the treasurer of said board the sum of ten dollars, and no applicant for a journeyman plumber's license shall be entitled to submit to the examination to be prescribed by said board until he shall have deposited with the treasurer of said board the sum of two dollars and fifty cents; each license when issued shall expire one year after the date of its issuance and shall have no force or effect after the expiration of one year from the date of its issuance. Any license, however, issued to a master plumber or a journeyman plumber, may be renewed annually without examination at any time prior to its expiration, by a written request for its renewal directed to the secretary of said board and the payment of the sum of ten dollars for a renewal of a master plumber's license or the sum of two dollars and fifty cents for the renewal of a journeyman plumber's license, and any such renewal shall also be for the period of one year.

SEC. 6. Nothing in this act shall prohibit any person from working as an apprentice in said trade of plumbing with a plumber duly licensed by said board as herein provided for, and under such rules and regulations as may be prescribed from time to time by said board of plumbing examiners: *Provided*, The name and residence of each apprentice and the name and residence of their employers shall be duly filed with said board, and a record in a suitable book to be provided by said board shall be kept by said board, showing the names and residences of such apprentices.

SEC. 7. Sufficient of the moneys derived from license fees, examination fees and the renewal of licenses, under the provisions of this act, shall be used by said board to defray the expenses of holding examinations in connection with the carrying out of the provisions of this act, including their own compensation and traveling expenses, and any surplus remaining shall be turned over to the State treasurer on the first day of July, 1907, and annually thereafter.

SEC. 8. The license and permit granted as herein provided may be at any time revoked for incompetency, dereliction of duty or other sufficient cause, after a full and fair hearing by said board.

SEC. 9. A majority of said board of plumbing examiners shall constitute a quorum for the purpose of transacting any and all business that may come before the board.

SEC. 10. All competent master plumbers and competent journeyman plumbers now engaged in the business or actually and regularly working at the trade of plumbing shall be entitled to a license to be issued by said board of plumbing examiners immediately after its organization as provided for by this act, without submitting or being required to submit to any examination whatsoever, upon the payment by each of the applicants for such license of the sum of ten dollars in the case of a master plumber and two dollars and fifty cents in the case of a journeyman plumber, and such license when issued shall be renewed from time to time annually as hereinbefore provided.

SEC. 11. If any section or provisions of this act be held by the courts of this State to be unconstitutional; it is hereby declared to be the legislative intent that the remaining sections or provisions of this act shall remain in full force and effect, to the same extent as though such unconstitutional portion had not been enacted, and the declaring of one section or provision void shall in no way affect the validity of the sections or provisions remaining.

SEC. 12. Any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor and shall be punished by a fine of not more than fifty dollars or less than ten dollars for each and every violation thereof.

SEC. 13. Any person making an application for a license as herein provided for who deems himself aggrieved by reason of the refusal of said board of plumbing examiners to grant a license to him shall have the right to appeal from the decision of said board to the superior court of the county in which he shall submit to his examination for a license.

Approved by the governor March 4, 1905.

CHAPTER 84.—*Inspection of factories.*

SECTION 1. Any person, firm, corporation or association operating a factory, mill or workshop where machinery is used shall provide and maintain in use, belt shifters or other mechanical contrivances for the purpose of throwing on or off belts on pulleys while running, where the same are practicable with due regard to the nature and purpose of said belts and the dangers to employees therefrom; also reasonable safeguards for all vats, pans, trimmers, cut-off, gang edger, and other saws, planers, cogs, gearings, belting, shafting, coupling, set screw, live rollers, conveyors, mangles in laundries and machinery of other or similar description, which it is practicable to guard, and which can be effectively guarded with due regard to the ordinary use of such machinery and appliances, and the dangers to employees therefrom, and with which the employees of any such factory, mill or workshop are liable to come in contact while in the performance of their duties; and if any machine or any part thereof, is in a defective condition, and its operation would be extra hazardous because of such defect, or if any machine is not safeguarded as provided in this act, the use thereof is prohibited, and a notice to that effect shall be attached thereto by the employer immediately on receiving notice of such defect or lack of safeguard, and such notice shall not be removed until said defect has been remedied or the machine safeguarded as herein provided.

SEC. 2. Every factory, mill or workshop where machinery is used and manual labor is exercised by the way of trade for the purposes of gain within an enclosed room (private houses in which the employees live, excepted) shall be provided in each workroom thereof with good and sufficient ventilation and kept in a cleanly and sanitary state, and shall be so ventilated as to render harmless, so far as practicable, all gases, vapors, dust or other impurities, generated in the course of the manufacturing or laboring processes carried on therein; and if in any factory, mill or workshop, any process is carried on in any inclosed room thereof, by which dust is generated and inhaled to an injurious extent by the persons employed therein, conveyors, receptacles or exhaust fans, or other mechanical means, shall be provided and maintained for the purpose of carrying off or receiving and collecting such dust.

SEC. 3. The openings of all hoistways, hatchways, elevators and wellholes and stairways in factories, mills, workshops, storehouses, warerooms or stores, shall be protected where practicable, by good and sufficient trapdoors, hatches, fences, gates or other safeguards, and all due diligence shall be used to keep all such means of protection closed, except when it is necessary to have the same open that the same may be used.

SEC. 4. It shall be the duty of the commissioner of labor, by himself or his duly appointed deputy, to examine as soon as may be after the passage of this act, and thereafter annually and from time to time, all factories, mills, workshops, storehouses, warerooms, stores and buildings and the machinery and appliances therein contained to which the provisions of this act are applicable for the purpose of determining whether they do conform to such provisions, and of granting or refusing certificates of approval, as hereinafter provided.

SEC. 5. Any person, firm, corporation or association carrying on a business to which the provisions of this act are applicable, shall have the right to make written request to said commissioner of labor to inspect any factory, mill or workshop, and the machinery therein used, and any storehouse, wareroom or store, which said applicant is operating, occupying or using, and to issue his certificate of approval thereof; and said commissioner of labor by himself, or his deputy, shall forthwith make said inspection. Upon receiving such application the commissioner of labor shall issue to the person

making the same, an acknowledgment that such certificate has been applied for, and thirty days after such acknowledgment, by said commissioner of labor, and pending the granting of such certificate, such acknowledgment shall have the same effect as such certificate, till the granting of such certificate by said commissioner of labor.

SEC. 6. Any employee of any person, firm, corporation or association shall notify his employer of any defect in, or failure to guard the machinery, appliances, ways, works and plants, with which or in about which he is working, when any such defect or failure to guard shall come to the knowledge of any said employee, and if said employer shall fail to remedy such defects then said employee may complain in writing to the commissioner of labor of any such alleged defects in or failure to guard the machinery appliances, ways, works and plants, or any alleged violation by such person, firm, corporation or association, of any of the provisions of this act, in the machinery and appliances and premises used by such person, firm, corporation or association, and with or about which such employee is working, and upon receiving such complaint, it shall be the duty of the commissioner of labor, by himself or his deputy, to forthwith make an inspection of the machinery and appliances complained of.

SEC. 7. Whenever upon any examination or reexamination of any factory, mill or workshop, store or building, or the machinery or appliances therein to which the provisions of this act are applicable, the property so examined and the machinery and appliances therein conform in the judgment of said commissioner of labor to the requirements of this act, he shall thereupon issue to the owner, lessee or operator of such factory, mill or workshop, or to the owner, lessee or occupant of any such storehouse, wareroom or store, a certificate to that effect, and such certificate shall be prima facie evidence as long as it continues in force, of compliance on the part of the person, firm, corporation, or association to whom it is issued, with the provisions of this act. Such certificate may be revoked by said commissioner of labor at any time upon written notice to the person, firm, corporation or association holding the same, whenever in his opinion after reexamination, conditions and circumstances have so changed as to justify the revocation thereof. A copy of said certificate shall be kept posted in a conspicuous place on every floor of all factories, mills, workshops, storehouses, warerooms or store to which the provisions of this act are applicable. If, in the judgment of said commissioner of labor, such factory, mill or workshop, or the machinery and appliances therein contained, or such storehouse, wareroom or store does not conform to the requirements of this act, he shall forthwith, personally or by mail, serve on the person, firm, corporation or association operating or using such machinery or appliances, or occupying such premises, a written statement of the requirements of said commissioner of labor, before he will issue a certificate as hereinbefore provided for; and upon said requirements being complied with, within a period of thirty days after said requirements have been served as aforesaid, the said commissioner of labor shall forthwith issue such certificate; but if the person, firm or corporation operating or using said machinery and appliances or occupying such premises shall consider the requirements of said commissioner of labor unreasonable and impracticable or unnecessarily expensive, he may within ten days after the requirements of said commissioner of labor have been served upon him, appeal therefrom or from any part thereof, to three arbitrators to whom shall be submitted the matter and things in dispute, and their findings shall be binding upon said applicant and upon the commissioner of labor. Such appeal shall be in writing, addressed to the commissioner of labor and shall set forth the objection to his requirements, or any part thereof, and shall mention the name of one person who will serve as the representative of said applicant calling for arbitration. Immediately upon the receipt of such notice of appeal, it shall be the duty of the commissioner of labor to appoint a competent person as arbitrator resident in the county from which such appeal comes, and to notify such person so selected, and also the party appealing, stating the cause of the arbitration, and the place, date and time of meeting. These two arbitrators shall select the third, and as soon thereafter as practicable, give a hearing on the matters of said appeal, and the findings of these arbitrators by a majority vote, shall be reported to the commissioner of labor, and to the applicant, and shall be binding upon each. The expense of such arbitration shall be borne by the party calling for the arbitration; and if said arbitrators sustain the requirements of said commissioner of labor or any part thereof, said applicant shall within thirty days, comply with the findings of said arbitrators, and thereupon the said commissioner of labor shall issue his certificate as hereinbefore provided (in section four of this act); but if said arbitrators shall sustain such appeal or any part thereof, the same shall be binding upon said commissioner of labor; and any such person, firm, corporation or association shall within thirty days, after the finding of the board of arbitrators, comply with the requirements of the commissioner of labor, as amended by said arbitrators, if so amended as herein provided for, and thereupon said commissioner of labor shall forthwith issue to any such person,

firm, corporation or association, his certificate as provided for in section four of this act: *Provided however*, That before any certificate shall be issued by said commissioner of labor as provided for in this act, the person, firm, corporation or association which has complied with the provisions of this act, shall pay to the treasurer of the State of Washington, an annual fee of ten dollars, and take his receipt therefor. Upon presentation of said receipt to said commissioner of labor, he shall forthwith issue said certificate as in this act provided. Said fee shall entitle the person, firm, corporation or association paying the same, to any and every inspection of any factory, mill, workshop, storehouse, wareroom, or store, and the machinery and appliances contained in any such premises, owned and operated by the party paying said fee, that may be necessary, for a period of one year subsequent to its payment; and all moneys collected for licenses and fines, under the provisions of this act, shall be paid into the State treasury and be converted into a special factory inspection fund, from which special fund shall be paid the deputy labor commissioners required to enforce the provisions of this act. Said deputy labor commissioners shall be paid from the special factory inspection fund, upon the presentation of vouchers properly signed by the labor commissioner in the same manner in which other employees of the State are paid.

SEC. 8. Any person, firm, corporation or association who violates or omits to comply with any of the foregoing requirements or provisions of this act, and such violation or omission shall be the proximate cause of any injury to any employee, shall be liable in damages to any employee who sustains injuries by reason thereof: *Provided*, The amount of damages which any one person may recover in an action for or on account of injuries received by reason of any alleged violation of any of the provisions of this act, is hereby expressly limited to the sum of seven thousand five hundred dollars.

SEC. 9. No action for the recovery of compensation for injury under this act shall be maintained unless notice of the time, place and cause of injury is given to the employer within six months, and the action is commenced within one year, from the occurrence of the accident causing the injury. The notice required by this section shall be in writing, signed by the person injured, or by some one in his behalf; but if from mental or physical incapacity it is impossible for the person injured to give the notice within the time provided in this section he may give the same within ninety (90) days after such incapacity is removed, and in case of his death without having given the notice because of mental or physical incapacity, his executor, or administrator may give such notice within thirty days after his appointment.

SEC. 10. Nothing in this act contained shall prevent any person from bringing an action under any other statute or act or at common law for any personal injuries received by him; and in that event the certificate provided for herein shall not be admitted in evidence in such suit or action.

SEC. 11. Any person, firm, corporation or association who violates or fails to comply with any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than twenty-five dollars nor more than one hundred dollars.

SEC. 12. A copy of this act, together with the name and address of the commissioner of labor, printed in a legible manner, shall be kept posted in a conspicuous place on each floor of every factory, mill, workshop, storehouse, wareroom or store, and at the office of every public and private work to which the provisions of this act are applicable, upon the same being supplied to the operators, owners, lessee, or occupants, of such places with sufficient copies thereof by the commissioner of labor.

Approved by the governor March 6, 1905.

CHAPTER 112.—*Payment of wages in scrip—Settlement.*

SECTION 1. Section one of "An act to provide for the payment of wages of labor in lawful money of the United States and to punish violations of the same," approved February 2, 1888, is hereby amended to read as follows: Section 1. It shall not be lawful for any corporation, person or firm engaged in manufacturing of any kind in this State, mining, railroading, constructing railroads, or any business or enterprise of whatsoever kind in this State, to issue, pay out or circulate for payment of wages of any labor, any order, check, memorandum, token or evidence of indebtedness, payable in whole or in part otherwise than in lawful money of the United States, unless the same is negotiable and redeemable at its face value, without discount, in cash or on demand, at the store or other place of business of such firm, person, or corporation when [where] the same is issued, and the person who, or company which may issue any such order, check, memorandum, token or other evidence of indebtedness shall upon presentation and demand redeem the same in lawful money of the United States. And when any laborer performing work or labor as above shall cease to work whether by

discharge or by voluntary withdrawal the wages due shall be forthwith paid either in cash or by order redeemable in cash at its face value on presentment at bank, store, commissary, or other place in the county where the labor was performed: *Provided*, Such order may be given payable in another county when the place of employment is more convenient of access to the employee.

Approved by the governor March 9, 1905.

CHAPTER 158.—*Bribery, etc., of employees.*

SECTION 1. Any agent, employee or factor of any firm, person, association or corporation, or any agent employee or officer of any corporation or municipality, who shall receive or accept any gift, bonus, gratuity, commission or thing of value from any person, firm, association or corporation with whom he shall contract for, or from whom he shall purchase any chattels, goods, wares, merchandise or material for his principal, employer, corporation or municipality, shall be deemed guilty of a misdemeanor.

Approved by the governor March 11, 1905.

CHAPTER 162.—*Employment of children—Certificates.*

(See Bulletin No. 62, page 279.)

WEST VIRGINIA.

ACTS OF 1905.

CHAPTER 46.—*Department of mines.*

SECTION 1. There is hereby created an executive department to be known as the "Department of Mines," which shall have for its purpose the execution and enforcement of all State laws pertaining to the inspection of mines, heretofore and hereafter enacted for the safety of persons employed within or at the mines within this State, and the said department of mines shall be in charge of an official to be known as the chief mine inspector, who shall have full charge of said department, and who shall superintend and direct the inspection of mines as herein provided and as provided by any other State law not in conflict with this act.

The chief mine inspector shall keep a record of all inspections made by himself and the district mine inspectors, which shall be a permanent record properly indexed. The records of the department of mines shall at all times be open to the inspection by any citizen of this State, and upon request of the governor of the State the chief mine inspector shall lay said records before said officer, also maps of mines furnished the chief mine inspector by the district mine inspectors. Any chief mine inspector who shall violate any of the provisions of this act shall, upon conviction thereof, be fined not less than twenty-five nor more than two hundred dollars, and may in the discretion of the court be imprisoned in the county jail not exceeding one year.

The chief mine inspector shall be a male citizen of West Virginia, and shall be a competent person, having had at least eight years' experience in the working, ventilation and drainage of coal mines in this State, and having a practical and scientific knowledge of all noxious and dangerous gases found in such mines; and to enable the said chief mine inspector to perform his duties he shall have the same authority to visit, enter and examine the mines as is conferred upon the district mine inspector, and he shall have the authority to call the assistance of any one of the district mine inspectors to any district in the State.

Within thirty days after this act becomes a law, and every four years thereafter, the governor of the State shall, with the consent of the senate, appoint a chief mine inspector whose term of office shall begin July 1, 1905, and shall be four years, or until his successor shall be duly appointed and qualified.

The salary of the chief mine inspector shall be eighteen hundred dollars per annum, and five hundred dollars for expenses, which shall be paid monthly out of the State treasury upon a requisition upon the State auditor, properly certified by the chief mine inspector.

SEC. 2. Within thirty days after this act becomes a law, and every four years thereafter, the governor of the State shall appoint one district mine inspector for each mining district within the State as hereinafter provided, whose term of office shall begin July 1, 1905, and shall be four years, or until his successor shall be duly appointed and qualified.

The salary of each district mine inspector shall be twelve hundred dollars per annum, and not more than five hundred dollars for expenses. Such salary and expenses shall be paid monthly out of the State treasury upon the approval of the chief mine inspector: *Provided*, That before payment of traveling expenses shall be made to the inspector he shall file an account of such expenses, verified by his affidavit, showing that they accrued in the discharge of his official duties. Every person so appointed district mine inspector must be a citizen of West Virginia, having a practical knowledge of mining and the proper ventilation and drainage of mines and a knowledge of the gases met with in coal mines, and must be a miner of at least six years' experience in coal mines, or having otherwise been engaged as an employee for six years within the mines of this State, and he shall not, while in office, be interested as owner, operator, agent, stockholder, superintendent or engineer of any coal mine, and he shall be of good moral character and temperate habits. An inspector of mines shall be removed from office by the chief mine inspector of this State for incompetency, neglect of duty, drunkenness, malfeasance and for other good causes.

Each of the district mine inspectors shall report in writing monthly to the chief mine inspector the number and condition of all mines inspected by him during each month, and shall deliver to the operator or operators of each mine inspected a certificate of inspection, and he shall visit each mine in his district at least once in every three months, or oftener if called upon in writing by twenty men engaged in any one mine, and make a personal examination of the interior of all mines, and outside of the mine where any danger may exist to the workmen, in their respective districts, and shall particularly examine into the condition of the mines as to ventilation, drainage and general safety, and shall make a record of all such examinations, and he shall see that all the provisions of the mining statutes are strictly carried out; and it shall be unlawful for any district mine inspector to appoint any deputy or other person to do and perform any work required of such inspector. Any mine inspector failing to comply with the requirements of this act shall be guilty of a misdemeanor; and upon conviction thereof shall be fined not less than one hundred dollars nor more than five hundred dollars, and be dismissed from office. The chief mine inspector and the district mine inspector shall, each, before entering upon the discharge of his duties, take the oath of office prescribed by the constitution and shall furnish bond in the sum of two thousand dollars, with security to be approved by the governor, conditioned upon the faithful discharge of his duty, a certificate of which oath and bond shall be filed in the office of the secretary of state. Vacancies in the office of chief mine inspector or district mine inspectors shall be filled by appointment for the unexpired term.

SEC. 3. Each district mine inspector shall, for each year ending with the thirtieth day of June, make a written report to the chief mine inspector of his proceedings, stating therein the number of mines in his district, the improvements made in and at the mines, the extent to which this act is obeyed or violated, and such other information in relation to mines and mining as he may deem of public interest, or as may be required of him by the chief mine inspector. He shall also suggest or recommend such legislation on the subject of mining as he may think necessary. Such report shall be filed with the chief mine inspector on or before the thirtieth day of September next succeeding the year for which it is made. The chief mine inspector shall annually make a full and complete written report of his proceedings as such chief mine inspector to the governor of the State for the year ending the thirtieth of June. Such report shall include the reports of the district mine inspectors, the number of visits and inspections made in the State by the district inspectors, the quantity of coal and coke produced in the State, the number of men employed, number of mines operated, ovens in and out of blast, improvements made, prosecutions, etc., and such other information in relation to the subject of mines, mining, inspection and needed legislation as he may deem of public interest and beneficial to the mining interests of the State. Such report shall be filed with the governor on or before the thirtieth day of December next succeeding the year for which it was made, and such report shall be printed upon the requisition of the governor, and in order that the report may be annually printed and distributed among the operators, miners and citizens of the State, the sum of fifteen hundred dollars shall annually be allowed out of the State treasury for this special purpose.

SEC. 4. The chief mine inspector, by and with the approval of the governor, shall divide the State into seven mining districts, in such a manner as to equalize as far as practicable the work of each district inspector.

Approved February 25, 1905.

CHAPTER 75.—*Employment of children.*

(See Bulletin 62, page 280.)

CHAPTER 76.—*Fire escapes on factories.*

SECTION 1. Every building or structure in this State of three or more stories in height, used as a factory or workshop, and in which ten or more persons are employed above the first story, or any hotel three or more stories in height, or any other building of more than three stories in height occupied or used as a tenement house, shall be provided with one or more suitable and substantial metallic fire escapes or ladders, reaching from the top of the first story to the cornice, and placed on the outside of the building. At each story above the first there shall be one or more metallic balconies substantially attached to the building and to the fire escape. Such fire escapes and balconies shall be in number, size, capacity, design and location as shall be necessary to furnish reasonable means of escape to all persons employed in the building in case of fire.

SEC. 2. It shall be the duty of the owner of every such building to equip the same as hereinbefore provided, within six months after the passage of this act. And thereafter no building as is described in the first section shall be used as a factory or workshop in which ten or more persons are employed above the first story, or a hotel three or more stories in height, until the same is so equipped. The word "owner" as used in this section shall include the person in whom is vested the legal title to the building.

SEC. 3. It shall be the duty of the mayor, the sergeant or chief of police, and the fire marshal of every city, town or village, annually to inspect every such building therein as described in the first section. They shall make inspection of any such building at any other time that they deem proper, and shall promptly make inspection of any such building whenever complaint thereof may be made to them in writing by any person. They shall serve written notice upon the owner, or his agent, of every such building not so provided with adequate fire escapes to provide the same within thirty days thereafter. It shall be the duty of the owner of such building to comply with such notice and to provide such adequate fire escapes within thirty days thereafter.

SEC. 4. Any such owner violating any of the provisions of this act shall be subject to a fine of not less than one hundred dollars (\$100), nor more than two hundred dollars, (\$200), which may be recovered before any justice or court having jurisdiction. Each week of failure to comply with the notice mentioned in section three shall be deemed a separate and distinct offense. And in addition, if any such owner shall fail for the space of sixty days after the receipt of such notice to provide adequate fire escapes, the building may be declared a nuisance in the manner prescribed in section twenty-eight of chapter forty-seven of the code of West Virginia. If any officer shall fail to perform any duty required of him by this act, or shall violate any of its provisions, he shall be fined not less than twenty-five dollars, (\$25), nor more than fifty dollars, (\$50), to be recovered before any justice or court having jurisdiction.

Approved February 25, 1905.

WISCONSIN.

ACTS OF 1905.

CHAPTER 129.—*Bribery, etc., of employees.*

SECTION 1. Whoever corruptly gives, offers or promises to an agent, employee or servant, any gift or gratuity whatever, with intent to influence his action in relation to his principal's, employer's or master's business; or an agent, employee or servant who corruptly requests or accepts a gift or gratuity or a promise to make a gift or to do an act beneficial to himself, under an agreement or with an understanding that he shall act in any particular manner in relation to his principal's, employer's or master's business; or an agent, employee or servant, who, being authorized to procure materials, supplies or other articles either by purchase or contract for his principal, employer or master, or to employ service or labor for his principal, employer or master, receives directly or indirectly, for himself or for another, a commission, discount or bonus from the person who makes such sale or contract, or furnishes such materials, supplies or other articles, or from a person who renders such service or labor; and any person who gives or offers such an agent, employee or servant such commission, discount or bonus, shall be punished by a fine of not less than ten dollars nor more than five hundred dollars, or by such fine and by imprisonment for not more than one year.

SEC. 2. No person shall be excused from attending, testifying or producing books, papers, contracts, agreements and documents before any court or in obedience to the subpoena of any court having jurisdiction of the misdemeanor on the ground or for the

reason that the testimony or evidence, documentary or otherwise, required of him may tend to criminate him or subject him to a penalty or forfeiture. But no person shall be liable to any suit or prosecution, civil or criminal, for or on account of any transaction, matter or thing concerning which he may testify or produce evidence, documentary or otherwise, before said court or in obedience to its subpoena or in any such case or proceeding: *Provided*, That no person so testifying or producing any such books, papers, contracts, agreements or documents shall be exempted from prosecution and punishment for perjury committed in so testifying.

Approved April 29, 1905.

CHAPTER 147.—*Inspection of factories—Blowers on emery wheels.*

SECTION 1. Section 1 of chapter 189 of the Laws of 1899 is hereby amended * * * so that said section, when amended, shall read as follows: Section 1. All persons, companies or corporations operating any factory or workshop where emery wheels or emery belts of any description are used for polishing, either solid emery, leather, leather covered, felt, canvas, linen, paper, cotton or wheels or belts rolled or coated with emery or corundum, or cotton wheels used as buff, shall, when deemed necessary, by the factory inspector, assistant factory inspector or any officer of the bureau of labor, provide such polishing wheels or belts with blowers or similar apparatus, which shall be placed over, beside or under such wheels or belts in such manner as to protect the person or persons using the same from the particles of the dust produced and caused thereby, and to carry away the dust arising from or thrown off by such wheels or belts while in operation, directly to the outside of the building or to some receptacle placed so as to receive and confine such dust: *Provided*, That grinding machines upon which water is used at the point of the grinding contact shall be exempt from the provisions of this act: *And provided further*, That this act shall not embrace nor apply to such wheels or belts as can not be so equipped without impairing the convenient or necessary use thereof.

Approved May 3, 1905.

CHAPTER 148.—*Assignments of wages.*

SECTION 1. There is hereby created and added to the Statutes of 1898 a new section to read as follows: Section 2313a. No assignment of the salary or wages of any married man, then or at the accruing thereof exempt by law from garnishment, shall be valid for any purpose unless such assignment shall be in writing signed by the wife, if she at the time be a member of his family, and unless her signature be witnessed by two disinterested witnesses: nor shall any such assignment be valid as to any such salary or wages to accrue more than two months after the date of the making of such assignment.

Approved May 3, 1905.

CHAPTER 226.—*Earnings of minors.*

(See Bulletin 62, page 281.)

CHAPTER 246.—*Employment of children—School attendance.*

(See Bulletin 62, page 284.)

CHAPTER 250.—*Protection of employees on buildings.*

SECTION 1. Section 2 of chapter 257 of the Laws of 1901, is hereby amended so as to read, when so amended, as follows: Section 2. Whenever complaint is made to the commissioner of labor, State factory inspector, any assistant factory inspector, or the chief officer charged with the enforcement of the building laws in the city where the work is being performed, that the scaffolding, slings, hangers, blocks, pulleys, stays, braces, ladders, irons or ropes of any swinging or stationary scaffolding used in the construction, alteration, repairing, cleaning or painting of buildings, are unsafe or liable to prove dangerous to the life or limb of a person, such commissioner of labor, State factory inspector, any assistant factory inspector or the officer charged with the enforcement of the building laws in such city, shall immediately cause an inspection to be made of such scaffolding, slings, hangers, blocks, pulleys, stays, braces, ladders, irons or other parts connected therewith. If, after examination such scaffolding, or any part thereof, is found to be dangerous to life or limb, the above person so authorized to inspect shall prohibit the use thereof, and require the same to be altered and reconstructed so as to avoid such danger. The commissioner of labor, State factory inspector, any assistant factory inspector, or the chief officer charged with the enforcement of

the building laws in such city, making the examination, shall attach a certificate to the scaffolding, slings, hangers, irons, ropes, or other parts thereof or connected therewith, so examined by him, stating that he has made such examination and found it safe or unsafe as the case may be. If he declares it unsafe, he shall at once, in writing, notify the person responsible for its erection of the fact, and warn him against the use thereof. Such notice shall be served personally or by mail upon the person responsible for its erection, and by conspicuously affixing it to such scaffolding, slings, hangers, blocks, pulleys, stays, braces, ladders, irons or ropes, or any part thereof so declared to be unsafe. After such notice shall have been so served and affixed, the person responsible therefor shall immediately remove such scaffolding or other part so declared to be unsafe, and alter or strengthen it in such manner as to render it safe in the discretion of the officer who examined it or of his superiors. The commissioner of labor, State factory inspector, any assistant factory inspector and the chief officer charged with the enforcement of the building laws of such city, shall have free access at all reasonable hours, to any building or premises containing any scaffolding or part thereof. All swinging and stationary scaffolding shall be so constructed as to bear four times the maximum weight required to be dependent therefrom or placed thereon, when in use, and not more than four men shall be allowed on any swinging scaffolding at any one time.

SEC. 2. Section 3, chapter 257 of the Laws of 1901, is hereby amended, so as to read when so amended, as follows: Section 3. All contractors and owners, when constructing buildings in cities, where the plans and specifications require the floors to be arched between the beams thereof, or where the floors or filling in between the floors are of fireproof material or brick work, shall complete the flooring or filling in as the building progresses to not less than within three tiers of beams below that on which the iron work is being erected. If the plans and specifications of such buildings do not require filling in between the beams of floors with brick or fire-proof material, all contractors for carpenter work, in the course of construction, shall lay the under flooring thereof on each story as the building progresses, to not less than within two stories below the one to which such building has been erected. Where double floors are not to be used, such contractor shall keep planked over the floor two stories below the story where the work is being performed. If the floor beams are of iron or steel, the contractors for the iron and steel work of such buildings, in the course of construction, or the owners of such buildings, shall thoroughly plank over the entire tier of iron or steel beams on which the structural iron or steel work is being erected, except such spaces as may be reasonably required for the proper construction of such iron or steel work, and for the raising and lowering of materials to be used in the construction of such building, or such spaces as may be designated by the plans and specifications for stairways and elevator shafts. If elevating machines or hoisting apparatus are used within a building in the course of construction, for the purpose of lifting materials to be used in such construction, the contractors or owners shall cause the shafts or openings in each floor to be enclosed or fenced in on all sides by a barrier of at least eight feet in height. If a building in course of construction is five stories or more in height, no lumber or timber needed for such construction shall be hoisted or lifted on the outside of such building.

SEC. 3. A new section is hereby enacted to be known as section 3a of chapter 257 of the Laws of 1901, which shall read as follows: Section 3a. The commissioner of labor, State factory inspector, assistant factory inspector and the chief officer charged with the enforcement of the building laws in such city are hereby charged with the enforcement of the provisions of this act.

SEC. 4. Section 4 of chapter 257 of the Laws of 1901 is hereby amended so as to read, when so amended, as follows: Section 4. Any owner, contractor, subcontractor, foreman or other person having charge of any work subject to the provisions of this act, if found guilty of violation of any of the provisions thereof, shall be subject to a fine of not less than twenty-five dollars nor more than one hundred dollars, or imprisonment of not less than three months nor more than one year by any court having competent jurisdiction.

Approved May 25, 1905.

CHAPTER 296.—*Guards on corn huskers and shredders.*

SECTION 1. No person, firm, or corporation shall offer or expose for sale any machine to be operated by steam or other power, for the purpose of husking or shredding corn or corn stalks unless the said machine shall be provided with reasonable safety devices for the protection from accidents from the snapping rollers, and shall be so guarded that the person feeding said machine shall be compelled to stand at a reasonably safe distance from the snapping rollers.

SEC. 2. It shall be unlawful for any person, firm or corporation owning such machine to use, operate or permit to be used or operated any such machine while the safety devices or guards are detached.

SEC. 3. No such machine shall be sold or offered or exposed for sale unless the said machine shall have plainly marked upon it the name and location of the person, firm or corporation manufacturing the same.

SEC. 4. Any such person, firm or corporation who shall violate any of the provisions of this act shall be punished by a fine of not less than twenty dollars nor more than one hundred dollars for each offense.

SEC. 5. It shall be the duty of the commissioner of labor, the factory inspector, or any assistant factory inspector to enforce the provisions of this act: *Provided*, That nothing herein contained shall be construed to authorize such commissioner, inspector or assistant inspector to select or compel the adoption of any particular or special safety device, and that the question of the reasonable safety of any such device used by any manufacturer shall be subject to judicial determination.

Approved June 3, 1905.

CHAPTER 303.—*Inspection of factories—Failure to guard machinery—Assumption of risk.*

SECTION 1. A new section is hereby added to the Statutes of 1898, to be numbered and to read as follows:

Section 1636jj. In any action brought by an employee or his legal representative to recover for personal injuries, if it appear that the injury was caused by the negligent omission of his employer to guard or protect his machinery or appliances, or the premises or place where said employee was employed, in the manner required in the foregoing section, the fact that such employee continued in said employment with knowledge of such omission shall not operate as a defense.

Approved June 5, 1905.

CHAPTER 338.—*Inspection of factories—Assistant inspectors—Certificates.*

SECTION 1. Section 1 of chapter 152 of the Laws of 1899, is hereby amended so as to read as follows: Section 1. The commissioner of labor and industrial statistics shall have power to appoint ten suitable persons as assistant factory inspectors who shall perform their duties under his direction and who may be removed by him for cause.

SEC. 2. The factory inspector or assistant factory inspector having inspected any factory or mercantile establishment under his jurisdiction shall, at the time such inspection is made, issue a certificate or statement as to how the factory laws were complied with at the time of his inspection.

Approved June 10, 1905.

CHAPTER 348.—*Safety appliances on railroads—Telltals.*

SECTION 1. Whenever in the State of Wisconsin there shall be over, above or across any of the tracks of any railroad a bridge, crossing, viaduct, or other obstruction of a height of less than seven feet above the roof of any freight car used or hauled over said road, or wherever there shall be upon any railroad in the State of Wisconsin any bridge or other structure that shall have over or above any track of said road a transverse beam, girder, rod or other obstruction at a height of less than that above mentioned, it shall be the duty of the officers of such railroad, to erect and keep in repair at or near such bridge, crossing, viaduct, or other obstruction telltales made and placed as provided for in section 2 of this act.

SEC. 2. The telltales mentioned in section 1 of this act shall consist of a transverse rod, beam or timber placed across the track or tracks of said railroad at such a height and at such distance from the bridge or other obstruction as the railroad commissioner shall direct, and from said rod or beam shall be suspended straps, ropes or cords of such size and of such length and of such material as the railroad commissioner shall direct; the said straps, ropes or cords shall be attached to said transverse rod or beam at a distance not greater than nine (9) inches from each other for a space of eight feet directly over the track; said telltales shall be placed upon both sides of such bridge, viaduct or other obstruction.

SEC. 3. Any railroad company, lessee or other person or persons operating any railroad that shall refuse or neglect to erect the telltales required by this act for the space of sixty days after notice from the railroad commissioner requiring erection of such telltales shall be liable to a penalty of not less than fifty nor more than one hundred dollars, to be recovered in an action to be brought by the attorney-general in the name of the State of Wisconsin in the county wherein such bridge or obstruction may be situated, and for every twenty days' delay thereafter in erecting such telltales,

such company or person shall be liable to the same penalty to be collected as above provided.

SEC. 4. Within sixty days from the passage of this act, every railroad or other company operating a line of railroad within the State shall file with the railroad commissioner at his office in Madison a verified statement showing the location of each bridge, crossing, viaduct, or other obstruction across any track or tracks of said road at a height of less than seven feet above the roof of any car used on or hauled over said road, and on or before the 30th day of June in each year it shall be the duty of such railroad or other company operating a line of railroad within this State to file with the railroad commissioner a like verified report together with a statement showing whether or not the provisions of this act have been fully complied with.

SEC. 5. An employee of a railroad corporation who is injured by or because of the existence of any bridge, viaduct or other obstruction over, above or across any of the tracks of said railroad at a height less than that provided in this act which has not been protected by the erection of telldales, as provided in this act, shall not be considered to have assumed the risk of such injury, although he continues in the employ of such corporation after the existence of such unguarded bridge, viaduct, or other obstruction has been brought to his knowledge.

Approved June 12, 1905.

CHAPTER 363.—*State civil service—Labor class.*

SECTION 2. After the passage of this act, appointments to, and promotions in the civil service of this State shall be made only according to merit and fitness, to be ascertained as far as practicable by examinations, which so far as practicable, shall be competitive. After the expiration of six months from the passage of this act, no person shall be appointed, transferred, removed, reinstated, promoted or reduced as an officer, clerk, employee or laborer in the civil service under the government of this State, in any manner or by any means, other than those prescribed in this act.

SEC. 11. The civil service commission shall require persons applying for admission to any examination provided for under this act, or under the rules and regulations of said commission, to file in its office a reasonable time prior to the proposed examination a formal application, in which the applicant shall state under oath or affirmation:

1. His full name, residence and post-office address.
2. His nationality, age, and the place and date of his birth.
3. His health and his physical capacity for public service.
4. His business and employments and residences for at least the five previous years.
5. Such other information as may reasonably be required touching the applicant's merit and fitness for the public service. * * * Applicants for positions in the recognized mechanical trades must have had practical experience for such periods as the commission may prescribe. * * *

SEC. 12. The offices, positions and employments in the classified service of the State shall be arranged by the civil service commission in five classes to be designated as the exempt class, the competitive class, the noncompetitive class, the labor class and legislative employees.

SEC. 21. The labor class shall include ordinary unskilled laborers. Vacancies in the labor class shall be filled by appointment from lists of applicants registered in their respective localities by the civil service commission according to rules and regulations determined by said commission except in cases of temporary employment. There may be separate lists of applicants for different kinds of labor or employments and the commission may establish separate labor lists for various localities, institutions and departments. Where the labor service of any institution or department extends to separate localities the commission may provide separate registration lists for each district or locality. The commission shall require an applicant for registration for the labor service before he can be registered to furnish such evidence or to pass such examination as they may deem proper with respect to his age, residence, physical condition, ability to labor, sobriety, industry, capacity and experience in the employment for which he applies.

SEC. 22. No subordinate or employee in the competitive class, noncompetitive class, or the labor class of the civil service of the State, who shall have been appointed under the provisions of this act or the rules made pursuant thereto, shall be removed, suspended for more than fifteen days, discharged, or reduced in pay or position, except for just cause, which shall not be religious or political. In all cases of removal the appointing officer shall, at the time of such action, furnish to the subordinate his reasons for the same and allow him a reasonable time in which to make an explanation. The reasons for removal and the answer thereto shall be filed in writing with the commission.

Approved June 14, 1905.

CUMULATIVE INDEX OF LABOR LAWS AND DECISIONS RELATING THERETO.

[This index covers the Tenth Special Report of the Commissioner of Labor, which is a compilation of the labor laws, both Federal and State, in force at the close of the year 1903; it also covers the labor laws enacted in 1904 and 1905 published in Bulletin Nos. 57 to 67 of this office. Many of the laws contained in the Tenth Special Report are briefly annotated. Decisions reproduced in the Bulletin since the publication of the Tenth Special Report are indexed under the appropriate headings, and are indicated by the letter "D" in parenthesis following the name of the State.]

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CONDITIONS OF ENTRANCE TO TRADES.
COST OF INDUSTRIAL INSURANCE.

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